



CHIEF OFFICE,
LONDON:
CANNON STREET,
E.C.

REGISTERED AS A NEWSPAPER.

BRANCH OFFICE,
AUSTRALASIA:
NORMANBY CHAMBERS,
MELBOURNE.

Subscription: **10/- PER ANNUM**, Post Free to any Part of the World.

ESTABLISHED IN

ENGLAND ... 1859.
AUSTRALASIA ... 1885.

Entered at Stationers' Hall.]

[Registered for Foreign Transmission.

No. 407. Vol. XXXII.

FEBRUARY 4, 1888.

{SUBSCRIPTION, 10s. PER ANNUM, INCLUDING
DIARY, POST FREE THE WORLD OVER.
SINGLE COPIES, 4d. EACH POST FREE.

Bynin. LIQUID MALT. REGISTERED.

A Concentrated Fluid Extract of Malt, rich in diastase. It is pleasant to take, keeps perfectly, and retains the strengthening nutritive and diastasic properties of malt in perfection. It forms a valuable adjunct to Cod Liver Oil in wasting diseases.

ALLEN & HANBURY'S,

MANUFACTURING AND ANALYTICAL CHEMISTS,

WHOLESALE AND EXPORT DRUGGISTS,

PLOUGH COURT, LOMBARD STREET, LONDON.

"CARNABYN"

(REGISTERED)

A NOURISHING MEAT AND MALT WINE.

Strongly recommended by the Medical Faculty in all cases of weakened constitution, and particularly useful in cases of ladies, whilst nursing, and delicate children, or in ailments where a stimulating—digestive—tonic—nutrient is indicated.

Dose—A quarter to Two Ounces twice daily.

In Bottles, 2s. 6d., 5s., and 7s. 6d. Samples Free to the Profession.

HOOPER & COMPANY,

CHEMISTS, ETC.

7 Pall Mall East, London, S.W.: also at 55 Grosvenor Street, and 26 Davies Street, W.

LABORATORY—MITCHAM, SURREY.

ALSO, AS SUPPLIED TO H.M. THE QUEEN AND THE ÉLITE OF THE ARISTOCRACY,

HOOPER'S SPARKLING SELTZER

2/6 per dozen. Six dozen Carriage free.

PURE SODA, PURE POTASH, LEMONADE, AND AROMATIC GINGER ALE.

Special Terms for Quantity.

Telegraphic Address—"BISMUTH LONDON."

Telephone—No. 9003.

MAY & BAKER

W. G. BAKER, R. C. NEATH, T. TYRER, W. E. B. BLENKINSOP

MANUFACTURING CHEMISTS BATTERSEA LONDON S.W.

MEDALS—1851, 1855, 1862, 1867, 1885.

WHOLESALE AND EXPORT ONLY.
MAKERS OF

BENZOIC CALLIC PYROGALLIC AND ALL PURE MINERAL ACIDS

(PURE) **ETHERS** (METHYLATED)

FOR ANÆSTHETICS PHOTOGRAPHY AND ICE MAKING

BISMUTH PREPARATIONS

SOLUTION OF AMMONIO-CITRATE OF BISMUTH P.B.

ALL FREE FROM SILVER LEAD ARSENIC &c &c &c

CORROSIVE SUBLIMATE RED AND WHITE PRECIPITATE PURE CALOMEL

& EVERY MERCURIAL PREPARATION

CONCENTRATED FRUIT ESSENCES & FLAVOURS

RASPBERRY ACID

SULPHITES & BISULPHITES OF LIME MAGNESIA POTASH & SODA

CYANIDES OF POTASSIUM

FOR GOLD & SILVER PLATING & PHOTOGRAPHY

LIQUID AMMONIA. 880.

REFINED CAMPHOR,

IN BELLS OR TABLETS, BY A NEW PATENT PROCESS.

AGENTS:

UNITED STATES—Mr. F. J. MACNAUGHTAN,
20 Cedar Street, NEW YORK.
AUSTRALASIA—Messrs. HARRISON & WHIFFEN,
6 Market Chambers, SYDNEY.SCOTLAND—Mr. D. SINCLAIR, 55 East Howard
Street, GLASGOW.
IRELAND—Messrs. COLVIN & CO., 11 Usher's Quay,
DUBLIN.

SOAP MACHINERY

W. NEILL & SON,

BOLD IRON WORKS, ST. HELENS, ENGLAND.

MANUFACTURERS OF

WROUGHT-IRON
SOAP PANS.

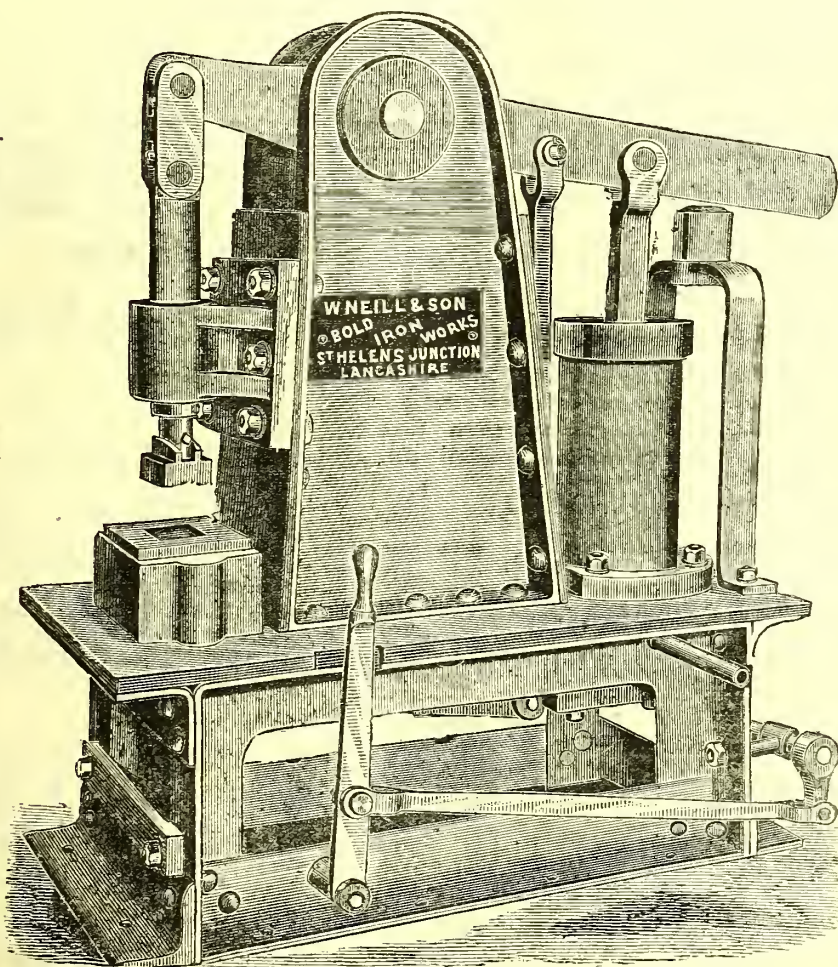
CAST-IRON SOAP
PANS.

WROUGHT-IRON
TANKS.

CAST AND
WROUGHT IRON
SOAP FRAMES
of Improved Con-
struction.

MECHANICAL
AGITATORS.

SUPERHEATERS
AND COILS,
for Open and Dry
Steam Boiling.



BAR CUTTING
MACHINES.

BAR CORNERING
MACHINES.

BAR PAIRING
MACHINES.

GRANITE
ROLLER MIXING
MACHINES.

SQUEEZING
MACHINES.

HOT-AIR DRYING
STOVES.

IMPROVED STEAM TABLET STAMPING MACHINE.

PRICES AND PARTICULARS ON APPLICATION.

2

THE EDINBURGH COFFEE ESSENCES.

INVIGORATING, DELICIOUS, ECONOMICAL, AND CONVENIENT.

SYMINGTON'S PURE COFFEE ESSENCE.



This Essence is guaranteed to contain all the soluble constituents of COFFEE (the only addition being Pure Sugar), the GRATEFUL AROMA of the freshly roasted Bean, being retained by their Special Process of manufacture.

The New 1s. Bottle makes 30 Cups of Coffee, equal to that made—in the most approved manner—direct from the finest Beans.

SYMINGTON'S PURE COFFEE ESSENCE is an almost certain cure for Nervous Headaches, etc.

A Sample Bottle will be forwarded free by Post to any Chemist on receipt of Card.

SYMINGTON'S DANDELION COFFEE ESSENCE

Is Specially adapted for the Dyspeptic and Bilious who cannot take ordinary Coffee.

This Beverage combines the Medicinal virtues of Taraxacum with the refreshing properties of Coffee.

The Shilling Bottle makes 25 Cups of Coffee.

Extract from the LANCET.

"The Essence of Dandelion Coffee is really an excellent substitute for coffee, and will, we think, be an advantage to many bilious and dyspeptic patients."

Extract from the BRITISH MEDICAL JOURNAL.

"Symington & Co.'s Coffee Essences have a standard reputation, and possess great merit. The Coffee Essence must be prepared *in vacuo* at a low temperature, as the aroma of the Coffee is well preserved; in its essential qualities it does not differ in any way from a cup of Coffee made in the ordinary way."



Forty large Cups of delicious Coffee made without trouble, for One Shilling, by using



SYMINGTON'S ESSENCE OF COFFEE AND CHICORY

Prepared from the finest Coffee, with a suitable proportion of Chicory, which is generally preferred.

The great and increasing demand for this article warrants the assertion that it is the

COFFEE FOR THE MILLION.

THOS. SYMINGTON & CO., CHEMISTS, EDINBURGH.

LONDON OFFICE—1 EAST INDIA AVENUE, E.C.

Post Free on application.

REVISED PRICE LIST

— OF —

FLETCHERS'
**Concentrated
Liquors**

For the Extemporaneous Production of

DECOCTIONS, INFUSIONS, TINCTURES,
AND
SYRUPS.

FLETCHER, FLETCHER & STEVENSON

Manufacturing Chemists, Holloway, London, N.

THE WESTMINSTER COLLEGE.

The next Course of Lectures and Classes will commence on Monday, February 20.

The system of study adopted has been tried with the most successful result. The effect of the method of teaching is to develop, strengthen, and enlarge the mental powers—TO EDUCATE. By this system, while sharp pupils make rapid progress, all, even the dull ones, are so interested in their work that they cannot fail to make satisfactory progress. In proof of these statements, gentlemen are referred to the hundreds of Testimonials in the hands of the Principals from former Pupils, and to the high position attained by the school during the Fifteen years it has been established.

At the Examinations held in London in December the following 28 students passed out of 31 who were sent in from this Institution:—

MAJOR.—Mr. H. W. HADSON.

MINOR.

Mr. BROOKES, J.	Mr. GREEN, F.	Mr. REYNOLDS, P.
" BATTY, G. A.	" HURN, A. J.	" ROESON, T. W.
" CALLAN, W. E.	" MACKERIDGE, W.	" ROUTLEY, E. W.
" COOPER, J. J.	" MASTERMAN, F. J.	" RYALL, F. J.
" COOPER, C.	" MORGAN, W. J.	" SPRY, R.
" DAVIDSON, D.	" PAIN, P.	" STAPLETON, F. W.
" DAVIDSON, J. R.	" PLEWS, W. H.	" WATKINSON, E. W.
" FRANKLIN, A. J.	" PHOR, J.	" WESTON, G.
" FORSTER, J. R.	" REES, C. A.	" WILCOCK, F. A.

WILLS'S UNIVERSAL POSTAL SYSTEM.

FEES—Minor, £1 1s.; Major and Preliminary, 10s. 6d.

"Those who cannot attend a school of pharmacy will find 'Wills's Universal Postal System' train them in a way they should go."—*The Chemist and Druggist*.

"Mr. Wills, of Westminster College, one of our most thoroughly successful tutors, extends him a helping hand, leaving it simply his own fault, and deserving it, if he bludily labours on in ignorant darkness."—*Magazine of Chemistry*.

For Prospectuses and other information, apply to

MESSRS. WILLS & WOOTTON
Trinity Square, Borough, London, S.E.

THE CHEMIST & DRUGGIST OF AUSTRALASIA.

DECEMBER 1887.

CONTENTS OF No. 12, VOL. 2.

Editorial articles on "The Prosecution of Unlicensed Vendors of Poisons," and on "Veterinary Registration."

NEWS OF THE COLONIES.

New South Wales.—Pharmacy Board—Pharmaceutical Society.—The Incorporation Bill (Special Report on the Debate on the Second Reading).

New Zealand.—Pharmacy Bill—General News—Correspondence from Dunedin.

Queensland.—Pharmacy Board—Pharmaceutical Society's Council Meeting (Official Report)—Pharmaceutical News from Special Correspondent.

South Australia.—Official Report of the Council Meeting of the Pharmaceutical Society—Proposed Pharmacy Board, or Council—The Pharmaceutical Society from a Public Point of View—General News.

Tasmania.—Quackery—Prosecution of Dr. Murphy—Registration in New South Wales—Friendly Societies' Act.

Victoria.—Pharmacy Board—Pharmaceutical Society—Pharmacy Board Prosecutions—Dentists' Registration Bill—Personal.

GENERAL NEWS.

Review.—Contribution towards a Bibliography of New Zealand.

The Adelaide Jubilee Exhibition.—Fifth Notice (Report on Aërated Water Apparatus—Bottles—Fitters—Sundries—Sheep Dips—Paints for Household Use).

Students' Corner.—Report and Comments on the Nineteenth Competition.

Correspondence.—Is Pharmaceutical Legislation Desirable? (J. B. Barlen)—Prescribing Proprietary Medicines (Lindsay Knight)—A Cure for Hurd Times (Practical)—The Title Analytical Chemist (Victorian)—Carriers' Charges (T. Shanasy).

Special Articles.—Chlorination Processes for the Extraction of Gold—Cheap Apparatus for Distilling Essential Oils—Trade Marks applied for.

(Copies may be obtained at the London office, 42 Cannon Street, E.C. 67 each, or the journal will be supplied to extra Australasian subscribers at 5s. per annum.)

THE LIVERPOOL SCHOOL OF PHARMACY

36 OXFORD STREET, LIVERPOOL.

Principal—Mr. J. S. WARD, Ph. Ch., F.C.S., Council Prize Medallist, &c.

Demonstrator—Mr. T. W. CARR.

For Preliminary Pupils—Mr. W. Pendlebury.

PASS LIST.

At the recent Examinations 9 were sent in for the Minor, 7 passed, viz:—

Mr. J. P. CASEWELL.....	MARKET DRAYTON.
" THOS. EDMONSON.....	COCKERMOUTH.
" G. W. GIBSON.....	WHITBY.
" G. J. KERR.....	LIVERPOOL.
" H. MADDOCK.....	MANCHESTER.
" J. W. WHITELEY.....	GAINSBOROUGH.
" F. H. WILKINSON.....	TRANMERE.

In announcing the Classes for 1888, the Principal has much pride in referring to the grand success of the Liverpool School during the past year, as shown by the Pass Lists.

During the year 1887 more than twice the number passed the various Examinations (Major, Minor, and Preliminary) from this school than were successful in 1886, or in any previous year.

Such results are highly gratifying, and Mr. Ward is determined, with the co-operation of the teachers and the pupils, to maintain the successes of the past.

The Classes are so arranged that Students can join at any time, and the fees are moderate.

Accommodation for indoor pupils, who have the special advantage of pursuing their studies under the supervision of the Principal.

Syllabus, with Time-tables, Fees, Pass Lists, &c., sent free on application.

"SYSTEMA OMNIA VINCIT."

SOUTH LONDON SCHOOL OF PHARMACY, LIMITED

325 KENNINGTON ROAD, S.E.

Managing Directors: Dr. MUTER, M.A., F.R.S. Ed., F.I.C., F.C.S., &c, and W. BAXTER.

ESTABLISHED 1st OCTOBER, 1868.

THE TWENTIETH SESSION, 1887-8,

Commenced on the 12th September.

THE NEXT TERM will commence on April 16, 1888.

FOR FEES, &c., APPLY TO THE SECRETARY.

"CONCILIO ET LABORE"

THE MANCHESTER COLLEGE OF PHARMACY,

225 & 227a OXFORD STREET, MANCHESTER.

At the January Examinations the undermentioned Six Students from this School passed the Minor:—

Mr. BENNETT.	Mr. CHALONER.
" COLMAN.	" DAVIDSON.
" HORNE.	" TAYLOR.

Twenty-five of Mr. Turner's men passed at the three last examinations of last year.

Full particulars of Mr. Turner's "Class System" sent on application.

LOISETTE'S System of Memory Training
is the ONLY one by which the Natural
Memory can be so much improved that the
System, as a Device, will be no more needed.
MARK TWAIN (Mr. S. L. Clemens) says
of Professor Loissette: "He showed me
how to **LIGHT UP** the dark cellar of
my Memory." Languages learned rapidly.
MEMORY Prospectus (containing opinions of pupils
who have **PASSED EXAMINATIONS** and
of members of the Medical, Scholastic,
Clerical, Military, and other professions)
post free from Professor LOISETTE, 37, New Oxford-st., London.

Just Published, Crown Octavo, Price 5s.

A PRACTICAL MANUAL OF VENEREAL AND GENERATIVE DISEASES:

Including SPERMATORRHEA, PROSTATORRHEA,
IMPOTENCE, and STERILITY in Both Sexes.

By M. K. HARGREAVES, M.D.

LONDON: R. KIMPTON, 126 WARDOUR STREET, LONDON, W.

THE LONDON HOMŒOPATHIC HOSPITAL AND MEDICAL SCHOOL, GREAT ORMOND STREET.

A NEW WARD, unoccupied for want of funds, is much needed for Malr.
Patients, and will be opened as soon as sufficient funds to support it are received.
The Hospital now contains eighty beds. Trained Nurses are sent out at moderate
cost for Medical, Surgical, or Accouchement cases, the latter specially Certificated.
G. A. CROSS, Secretary

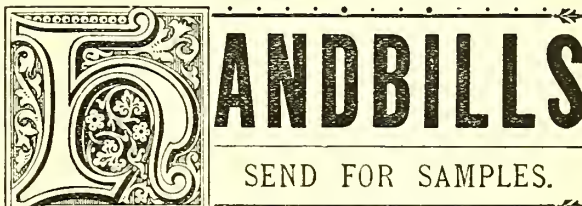
FOR CLEANING PLATE

BRADLEY & BOURDAS'S
ALBATHUM or WHITE ROUGE,
For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter
of a century ago, the sale has amazingly increased both at home and
abroad. A trial is only needed to prove its superiority over other plate
powders in use. Sold in Boxes at 1s. and 2s.; Tins 6s. 6 Pont Street,
Belgrave Square, and 48 Belgrave Road, London, S.W.

JAMES TOWNSEND, MEDICAL LABEL PRINTER, EXETER.

THE LATEST!
TOWNSEND'S
NEW ILLUSTRATED



SEND FOR SAMPLES.

CHEMISTS' SLIP LABELS, FROM 1/- 1000

BILLHEADS	HANDBILLS
CARD PRICE LISTS	LINSEED MEAL BAGS
CIRCULARS	MEMORANDUM FORMS
POWDER ENVELOPES	POISON REGISTERS
PRESCRIPTION DITTO.	SYPHON REGISTERS
TOOTH BRUSH DITTO.	POSTAL BOXES
VERMIN KILLER DITTO.	PRESCRIPTION BOOKS
GOLD PAPER LABELS	WRAPPING PAPERS.

JAMES TOWNSEND, MEDICAL LABEL PRINTER, EXETER.

FORD, SHAPLAND & CO.

MEDICAL LABEL & GENERAL PRINTERS, ENGRAVERS, &c.. 6 GREAT TURNSTILE, LONDON, W.C.

COLOURED COUNTER BILLS,

Printed in Colours, and specially designed for Chemists' Advertising. A Great Novelty.

CHEMISTS' COUNTER BILLS,

On GOOD WHITE PAPER, at LOWEST PRICES ever offered.

10,000 Crown 8vo. Bills (7½ in. × 5 in.) **12/0**

10,000 Demy 8vo. Bills (9 in. × 5½ in.) **17/6**

ALL OTHER SIZES AT EQUALLY LOW RATES. SAMPLES AND PRICES ON APPLICATION.

CHEMISTS' FLY PAPERS, Chemically prepared and guaranteed to be thoroughly effectual; printed with own name and
address and advertisements on the four sides. Specimens and Prices on application.

HEADQUARTERS FOR TOILET FIXTURES & ROLLS.

GREAT REDUCTION IN PRICE OF ROLLS.

1st QUALITY.

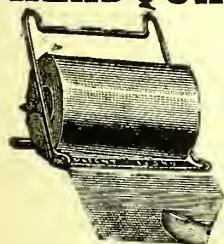
5s. 6d. dozen, or 63s. per case of 1 gross.

A first-class paper, soft and yet tough.

2nd QUALITY.

4s. 6d. dozen, or 100s. per case of 2 gross.

Splendid value.



THE SIMPLEX PATENT.
9/ dozen.
Complete with roll.



THE CROWN PATENT.
Bronze, 15/ dozen.
Nickel, 18/ dozen.
Complete with roll.

JOHN S. DOWNING, Commercial Street, BIRMINGHAM.
73 Virginia Street, GLASGOW.

London Agency—
9 Rose Street, E.C.

EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of $\frac{1}{2}$ d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount. Please write out your advertisement in this diagram, one word in each space. You will then see at a glance how much the cost will be—namely 1d. per word if your address is kept private; $\frac{1}{2}$ d. per word if your name and address is attached.

FOR DISPOSAL.

Soda-water Machinery.

Rotary racking pump, Invieta, 3*l.* 10*s.* "Czone,"
Cale Street Distillery, Chelsea.

Drugs and Chemicals.

Hop resin, a very powerfully appetising and
soothing tonic; would be an invaluable
appetising adjunct in horse balls, pills, and
medicated lozenges; being a by-product 6*d.*
per lb. only, 7 lbs. 3*s.* Hay, Manufacturing
Chemist, Hull.

Proprietary Articles.

Seven 2*s.* 9*d.* Henry's magnesia, 7 1*s.* 9*d.* Ford's
balsam; patents at 1*s.* 1*½**d.*, 7 Smith's
pectorine, 5 Brandreth's pills, 3 Lambert's
balsam, 2 Thompson's Burdock pills, 4
Wright's pills, 8 Rackham's pills, 7 Frampton's
pills, 5 Hooper's pills, 5 Henry's nervine,
5 Roper's pills, 4 Powell's electrolyte, 14
Powell's electrolyte, 9*½**d.*; half retail price.
Fletcher, Atherton.

Literature.

50 per cent. off published prices.—Tolhuuter's
"Euclid," Newth's "Natural Philosophy,"
Cooley's "Latin Grammar," Mason's "Eng-
lish Grammar," Hammel's "French Gram-
mar," Todhuuter's "Natural Philosophy,"
Luff's "Chemistry," Todhuuter's "Algebra,"
all at 1*s.* 9*d.*; Gase's 1*st.* 2*nd* "French
Books," 2*s.*; "Key" to ditto, 1*s.* 3*d.*; Green's
"Euclid" (symbolic), 1*s.*; "Public School
Latin Grammar," 1*s.*; Horace, "Odes," 1*s.*;
Virgil's "Georgics, Bucolics," 1*s.*; "English,
Past and Present," Trench, 2*s.* 6*d.*; Mason's
"Euclid Explained," 1*s.* 6*d.*; "Cicero de
Amicitia" (Reid), 1*s.* 6*d.*; Giles's "Key to
Virgil," Lib. v.-viii., 1*s.* 6*d.*; ditto Cicero's
"Amicitia," 1*s.* 6*d.*; Sallust, "Cataline
War," 1*s.*; Giles's "Key" to ditto, 1*s.*;
Colenso's "Algebra," 1*s.* 6*d.*; "Key" to ditto,
1*s.* 6*d.*; "Language," Findlater, 1*s.*; Bent-
ley's "Botany," 3*rd* edition, 7*s.* 6*d.*; "Att-
field," 11*th* edition, 10*s.*; "Selecta & Pre-
scriptis," 14*th* edition, 2*s.* 6*d.*; Lindley's
"School Botany," 2*s.* 6*d.*; Wills' "Minor
Lectures," MSS. up to No. 40, 2*s.* 6*d.*;
Wittenstein's "Pharmaceutical Chemistry,"
2*s.* 6*d.*; Woodhall's "Arithmetical Chem-
istry," 1*s.*; Crum Brown's "Chemistry," 1*s.*;
Wills' "Pharmacy" (soiled), 2*s.* 6*d.*; Stew-
art's "Physics," 2*s.* 6*d.*; "Materia Medica"
(Bruce), 4*s.* 6*d.*; Druitt's "Vade Mecum,"
2*s.* 6*d.*; Klein's "Histology," 4*s.* 6*d.*; Foster's
"Physiology," 14*s.*; ditto "Practical," 4*s.* 6*d.*;
Huxley's "Physiology" (revised), 3*s.* 6*d.*;
"Universe" (Pouchet), 15*s.*; "Vegetable
Kingdom" (Riind), 3*s.*, for 10*s.*; "Phar-
macopœia Londinensis," 3*s.*; Phillip's
"Translation" ditto, 3*s.*; "Chemistry, Arts,
and Manufactures," 7 vols., 3*l.* 10*s.*, for 3*s.*;
Students' "British Encyclopædia," 3 vols.,
4*l.* 4*s.* 6*d.*, for 2*l.*; Smith's "Latin & Principia,"
1 and 1*l.*, 2*s.* each; mostly all above un-
soiled. Gill, 221 Spon Lane, West Bromwich.

"Attfield's Chemistry," ninth edition, 7*s.* 6*d.*;
also sixth edition, 6*s.* Keut, 29 High Street,
Windsor.

Chemist and Druggist for 1885 and 1887, complete
and clean; best offer in cash accepted.
J. T. Chapman, Photographic Chemist,
Manchester.

Pharmaceutical Journal, weekly numbers, with
advertisements, guaranteed complete from
commencement, 20*s.*; botanical, medical,
surgical, and chemical books at 2*s.* 6*d.* each,
free; returnable list for stamped envelope;
few drugs. Davis, 31 Mayton Street,
Holloway, N.

Wills' "Pharmacy," fourth, 3*s.*; "Præscripta,"
with key, 1*s.* 3*d.*; "Physics," 1*s.*; Pereira,
"Selecta & Præscriptis," fourteenth, 2*s.* 6*d.*;
Leache's "Dispenser's Handbook," fourth,
2*s.* 3*d.*; Beasley's "Receipt Book," second,
3*s.*; "Pocket Formulary," fifth, 3*s.*; Griffin's
"Experimental Chemistry," tenth, 1*s.*;
"Art of Dyeing," 2*s.* 6*d.*; Bateman's
"Magnificolia," 2*s.*; Mohr and Redwood's
"Practical Pharmacy," 4*s.*; good order; post
paid. Gib Graham, Girvan, Ayrshire.

Shop Fittings.

Fifteen doz. new shop rounds and jars, gold
labelled, 8*l.* 10*s.*; 12 ft. range pine drawers,
gold labelled, 6*l.* 10*s.*; 12 ft. range mahogany
ditto, glass labelled, 9*l.* 10*s.*; dispensing
screen, 6 feet long, with mirror centre and
marble slab, very handsome, 6*l.*; plate-glass
counter-case, 36 x 18, 1*l.* 15*s.*; dispensing case,
4 feet long, 3*l.* 15*s.*; 4 4-gallon carboys, 10*s.*
each; 4 2-gallon ditto, 6*s.* each; 6 6-gallon
ditto, 14*s.* each; 12 3-lb. blue jars, labelled,
24*s.*; 12 2-lb. ditto, 18*s.*; 200 second-hand
mahogany drawers, cheap; 4 and 8-gallon
carboys, 21*s.* each; 1 10-gallon ditto, 21*s.*;
toothbrush case, 30*s.*; No. 12 Wedgwood
mortars, 11*s.*; 24 pill-machine, 16*s.* 6*d.*;
glass case and desk, 50*s.*; ditto, 40*s.* R.
Tomlinson & Sons, Bond Street, Constitution
Hill, Birmingham.

Formulæ.

Tenth year's advertisement, 1,500 clients, hun-
dreds testimonials, strictly confidential;
Brook's recipes are best; preparations all in
commerce; try them.—"Influenza Mix-
ture," acts like magic, pleasant and safe;
"Glycerine Cream" (like Beetham's), rapidly
cures chapped hands, frost-bites, &c., render-
ing skin like velvet; "Hop Tonic," better
than any other, can be made instantan, costs
1*s.* 1*½*; "Canadian Cone," certain cure for
chilblains, sweet and cleanly; "Bronchelixir,"
rapidly gives relief in bronchitis and chest
affections, wonderful remedy; "Embrocacio
Alb.," inseparable white oils, fac-simile of
Elliman's, certain to please, easily made;
"The Jubilee Sance," universally liked, most
luscious, renders cold meat a luxury, differs
from any other, costs under 6*d.* a pint;
recipes 1*s.* 1*d.* each, 3 for 2*s.* 6*d.* Special
offer.—Cut this out and above will be sent
(as sample) for 5*s.*; list free. Tom Brooks,
Chemist, Louth, Lincs.

Reliable recipes, 6*d.* each; full set of 130, neatly
copied in book, 7*s.* 6*d.*; send for list.
"Chemist," Edwards, Wye, Kent.

Apparatus.

A mahogany pill machine, to cut 24; in good
condition and nearly new; price 17*s.* Kemp,
Alford, Lincolnshire.

Miscellaneous.

7 lbs. best Pontefract cakes, carriage paid, for 6*s.*
Young, Pontefract.
Water bed, nearly new, cost 10*l.*; what cash
offers? Kirkman, Wimbledon.
About 50,000 medical labels; offers wanted. A.
Fieldsend, Chemist, Penistone.
Microscope, good as new, in walnut case, lock
and key, no accessories, 3*l.* 10*s.*, cost 5*l.* 5*s.*
recently; approval. 153/28.
Microscope objects, 6*d.* each, 5*s.* dozen, large
variety; list; approval. Henry Ebbage,
Framlingham.
What offers for Enterprise tincture press, nearly
new? or will exchange for serviceable tooth
forceps. Thomas, Hampton, Middlesex.
Small real diamond ring; suit lady or gentle-
man; price 2*l.* 10*s.*, worth quite double.
Samuel Arthur, 1 Victoria Road, Southsea.
Eleven double, eighteen single trusses, various
sizes, some slightly soiled, 25*s.* the lot; 3-oz.
white covered pots, about 12 dozen, 1*s.* per
dozen; cyclostyle (scarcely been used), 20*s.*,
cost 27*s.* 6*d.* Crofts, Chemist, Birkenhead.

WANTED.

Dispensing counter with drawers, 6 feet. Full
particulars, Bond, Somerton, Somerset.
A first-class formula for sanitary lotion for
children's hair. 151/4.
"British Pharmacopœia," 1885, reasonable. J.
N. Scowby, 682 Holloway Road, London, N.
Coles, or any other good work, or "Mechanical
Dentistry." Doubleday, Dorking.
Pair Stanhope telephones. Condition, price,
Ponsford, Newton Abbott.
Chemist and Druggist posted weekly for 1883;
what offers? E. T., 4 Chadwick Street,
Hunslet.
Students' achromatic microscope by first-class
maker; Cooley's "Encyclopædia," sixth
edition. Herbert, Chemist, Wavertree.
Graham, Chemist, Girvan, Ayrshire, wishes two
pairs dispensing scales, good order and
cheap. Write at once, giving particulars.
Gray's "Anatomy," Tomes' "Dental Anatomy,"
latest editions; also disarticulated skull.
State prices, Watt, Chemist, West Hartle-
pool.
Nest of shop drawers, 6 ft. by 3 ft. 6 in.; also ditto
3 ft. 6 in. high, 2 ft. 6 in. wide, for under,
desk; plain deal, but must be sound. Gill
221 Spon Lane, West Bromwich.

Address Wanted.

The address of Captain Atkinson Grimshaw,
who is supposed to be residing in or near
London. Sutherland, Totnes.

HAY'S HOP ALE ESSENCE

REGISTERED TRADE MARK.

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

Is made from the Choicest Hops Grown.

HAY'S HOP ALE ESSENCE

"Supplies an excellent stomachic, appetising, and agreeable summer drink."

Brewers' Journal.

"A beautiful essence, has a fine Hop Aroma, and is quite a pharmaceutical triumph."

The Chemist and Druggist.

"For this Essence a brilliant future may be anticipated. It possesses characteristics very seldom to be met with."

Mineral Water Trade Review.

"For flavour, strength, and real solubility, this Essence leaves nothing to be desired."

British & Colonial Druggist.

TRADE MARK



HAY'S HOP ALE

"This is an excellent Non-Alcoholic beverage."

The Lancet.

"Evolves a delicious aroma of Hops."

Medical Press.

"It is a Fine Bitter Beer, pouring out with a rich creamy head."

British & Colonial Druggist.

"Possesses the Aromatic bouquet and pleasant flavour of the genuine Hop."

Mineral Water Trade Review.

"Is a nearer approach to Bass or Allsopp's Ale than any non-intoxicants preceding it."

Eastern Morning News.

Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.

Quantity required, two fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S HOP ALE ESSENCE

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

"Since Mr. HAY, the well-known Manufacturing Chemist, of Hull, surprised the Pharmaceutical world, some ten years since, by the production of what, until then, had been thought an impossibility, viz., a perfectly soluble and transparent **ESSENCE OF GINGER**, nothing he has done has attracted so much attention in this direction as his latest **ESSENCE OF HOPS**, which, like his other Essences, is a production unique in itself. The **HOP ALE** made from this Essence evolves a **DELICIOUS AROMA OF HOPS**, and supplies that much longed-for desideratum of abstainers, 'A Glass of Non-Alcoholic Beer.' We have always felt that teetotallers laboured under a disadvantage that ought not to exist, in having no really decent beverage in the place of Wine and Beer. By this Pharmaceutical triumph of Mr. HAY, this difficulty has been overcome, and it affords us much pleasure to commend this truly Temperance Drink to the notice of abstainers and non-alcoholic abstainers alike."

—Medical Press.

HAY'S HOP ALE ESSENCE [1]

"Is certainly remarkable for the purity and reality of its results. Made from the choicest hops, and treated in a manner of which Mr. HAY appears to possess the monopoly, this **HOP ALE ESSENCE** supplies an excellent stomachic, and an agreeable stimulating Summer Drink. The **HOP ALE** produced by this **ESSENCE** is of a most refreshing and invigorating character, with all the appetising flavour and delicate aroma of its more intoxicating prototype, which it approximates more closely than any similar preparation we have yet tasted. It may be advantageously taken up as a speciality for which a large consumption may safely be predicted."—*Brewers' Journal.*

W. HAY, Manufacturing Chemist, Beverley Road, **HULL,**
ENGLAND.

"THE BEST NATURAL APERIENT."

Persistent attempts are made by interested parties to deceive the public by offering Natural Mineral Aperient Waters with marks, names, and designations very similar to those which are used by the **APOLLINARIS COMPANY, LIMITED**, for the **NATURAL MINERAL APERIENT WATERS** imported by them.

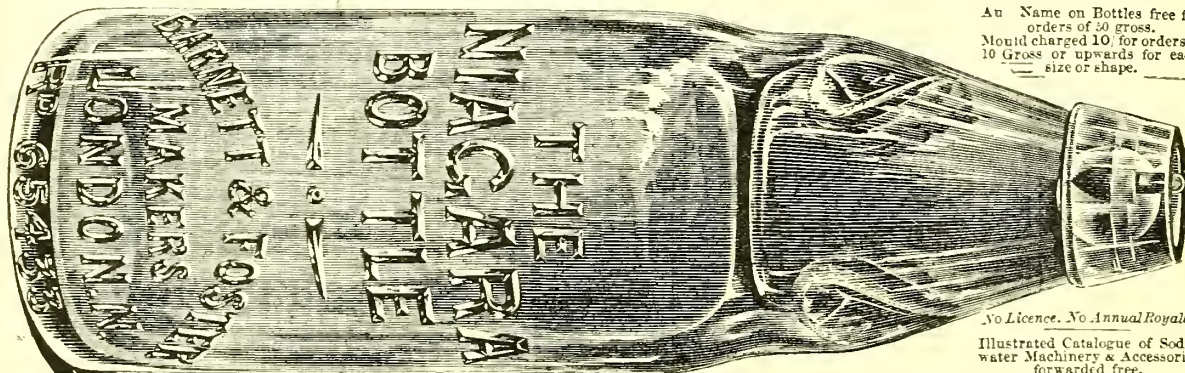
Under these circumstances the **APOLLINARIS COMPANY, LIMITED**, feel compelled to caution the public that the **HUNGARIAN BITTER WATER** sold by the **COMPANY** always bears the name of the **APOLLINARIS COMPANY, LIMITED**, on the Label

ROBERT GIBSON & SONS,

MANUFACTURERS OF HIGH-CLASS LOZENGES OF EVERY DESCRIPTION,
JUJUBES, BOILED SUGARS, COMPRESSED PELLETS, &c., &c.

Shipped through London Houses to all parts of the World. Price Lists sent on application to the Works,
ERSKINE STREET, HULME, MANCHESTER ENGLAND.
LONDON DEPOT—1 AUSTRALIAN AVENUE.

THE "NIAGARA" GLOBE-STOPPERED BOTTLE.



An Name on Bottles free for
orders of 50 gross.
Mould charged 10. for orders of
10 Gross or upwards for each
size or shape.

No Licence. No Annual Royalty.
Illustrated Catalogue of Soda-
water Machinery & Accessories
forwarded free.

Present Prices, net:—SPLITS, 14/, FULL SIZE, 16/ per Gross, including Rings. 12 and 14 oz., 1/; 16 oz., 2/ extra per Gross. At our Works, LEEDS, YORKSHIRE.

EXTRA RINGS, 1/8, 1/9, and 2/ per Gross.

SEND FOR SAMPLE AND COMPARE!

ORDERS TO BE SENT TO

BARNETT & FOSTER,

Mineral Water Engineers, Manufacturing Chemists,
and General Providers to the
Aërated Water, Wine, Beer, and Cider Trades,

"NIAGARA WORKS," 26^T EAGLE WHARF ROAD, LONDON, N.

ROBINSON'S ORANGE WINE.

Especially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cask containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6, Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.
B. ROBINSON, Distiller and Brewer of British Wines, Church St., Fendleton, Manchester.

46 MINORIES LONDON E.C.
New York
Sydney
&c.

BOXES BOTTLES MACHINERY
ESSENCES
Catalogues Circulars Testimonials
Post Free

SODA WATER MACHINERY
AND ALL ACCESSORIES
FOR THE TRADE

BRATBY & HINCHLIFFE

HEAD OFFICE
SANDFORD STREET, ANCOATS, MANCHESTER

GUÉRET FRÈRES,

Mechanical Engineers, privileged in France and Abroad,

72, BOULEVARD DE LA GARE, PARIS.

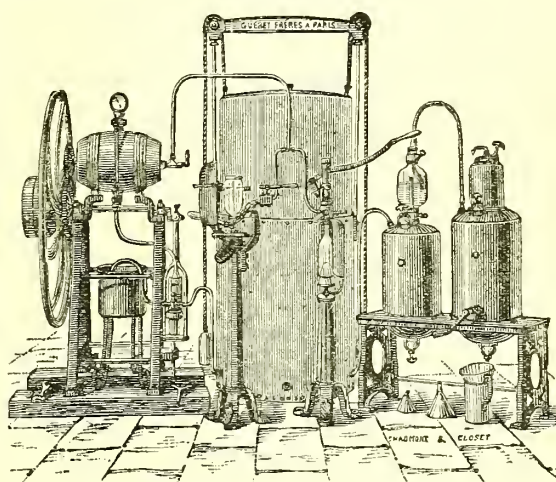
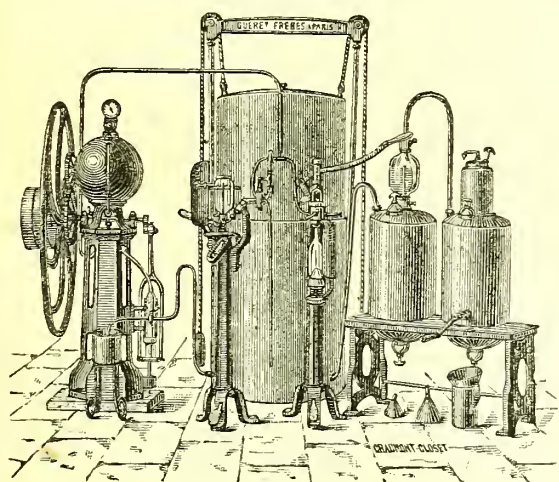
GOLD MEDAL, AMSTERDAM, 1883.

PLANT & SYPHONS FOR THE MANUFACTURE OF AÉRATED BEVERAGES,

WITH ALL THE LATEST IMPROVEMENTS.

COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.



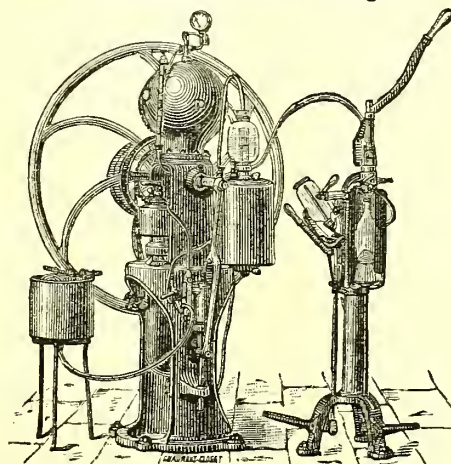
SYPHONS

With small levers, fittings of metal of highest quality, and best glass.



CONTINUOUS APPARATUS

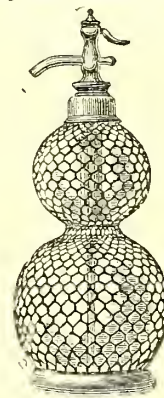
For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



GAZOSELTZ

For the instantaneous production of Aërated Beverages at table.

Any one can use them.

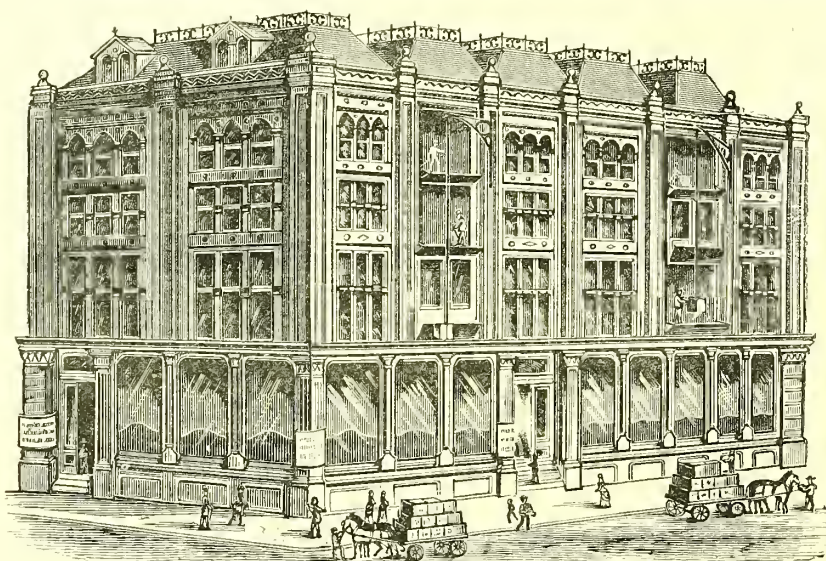


FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.

HESELTINE'S

THE PREMIER TEA OF INDIA AND
CEYLON, IS THEIR SPECIAL IMPORTATION
AND THE PERFECTION OF TEA.

REGISTERED "TAPRABUNDA" TRADE MARK.



OFFICES AND DUTY PAID WAREHOUSES.

For Retail at 1s. 8d., 2s., and 2s. 6d.

In Lead Packets, $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

WM. HESELTINE & SON,

56 Wilson Street, and 1 & 3 Earl Street, Finsbury,

LONDON, E.C.

AGENTS WANTED WHERE NOT ALREADY REPRESENTED.

**WHAT YOU CAN
WHAT YOU SHOULD
SELL**

CASSELL'S CEYLON TEAS

THE LANCET, September 25, 1886, says of Cassell's Ceylon Teas:—

"The Tea Plantations of Ceylon have been a great success, and have aided in an important degree to the material resources of the Island. The sample now before us is very satisfactory. There is no facing or other mineral matter. The leaves are small and clean, and give a strong decoction of delicate flavour. Such Tea may well replace the product of China."

THE GROCER, January 2, 1886, says:—

"The Ceylon Teas Messrs. Cassell have named and registered as 'The Tea of the Future,' a title which will most probably prove true, if the consumption of this really fine article increases in the same ratio that it has done during the past two or three years."

**"FRAGRANT TEA,"
"PURE AS IMPORTED,"**

In Air-tight Lead Packages, $\frac{1}{4}$, $\frac{1}{2}$, and 1 pound.

Charged $\frac{1}{8}$ sells $\frac{2}{1}$, $\frac{2}{1}$ sells $\frac{2}{6}$, $\frac{2}{6}$ sells $\frac{3}{1}$.

Agents appointed in City, Town, and Village.

Write for Sample Packages, sent post-free.

Handbills, Showcards, &c., sent with each order.

THIS TEA COMMANDS A SALE.

ADDRESS:—

J. CASSELL & CO., 80 Fenchurch St.
LONDON.

DESIRABLE & PROFITABLE AGENCY FOR CHEMISTS.

SPRING BLOSSOM CEYLON TEA.

Packed in three qualities, in handsome and attractive packages, and sent out in cases containing 40 lbs. each, to hold one size only, either 1 lb., $\frac{1}{2}$ lb., or $\frac{1}{4}$ lb. Air-tight Tin Canisters, to sell retail at 2s., 2s. 6d., and 3s. per lb. Quarter Pound Samples on receipt of Stamps.

Terms—Cash, less discount of 3d. in the £, carriage paid, or Two months net on receipt of satisfactory London references.

Our Fortnightly Price Current Post Free on application.

CAVE, JOHNSON & CO., WHOLESALE TEA AND COFFEE DEALERS, 8 LIME ST., LONDON, E.C.

BANKERS—WILLIAMS, DEACON & CO.

[2]

N.B.—This Tea being packed in Air-tight Tin Canisters is not liable to be deteriorated by the flavour of any other foreign substance.

PURE SPIRITS OF WINE.

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. STEAM STILL ONLY.

GEORGE PHILLIPS & CO.,
ST. ANDREW'S DISTILLERY, CLERKENWELL RD.
LONDON, E.C.

12½ gals. for £1, Cash free.
SPECIAL LINES FOR CASH BUYERS.
TYRER'S
WORCESTER SAUCE,
YORKSHIRE SAUCE,
"BOROUGH" KETCHUP.
BEST VALUE THAT MONEY CAN PURCHASE.

Prices and Samples sent free of all cost by
PETER TYRER, The "Borough" Ketchup & Sauce Maker,
70 LONG LANE, LONDON, S.E.

Edwards' BY ROYAL
LETTERS PATENT.
HIGHEST AWARDS: Desiccated Soup.

International Health Exhibition, LONDON, 1884.
International Exhibition, LIVERPOOL, 1886.

Consists of the finest Vegetables and Extract of Beef in a dry state.
The Manufacturers beg to direct the attention of the Trade to the above article, now commanding a ready and remunerative sale. It is put up in a neat and attractive form, in 1-lb., $\frac{1}{2}$ -lb., and $\frac{1}{4}$ -lb. tins, to sell at 1s. 3d., 8d., and 4d.; also in packets containing 1 oz. at 1d. These are packed in cases of 36 1-lb., 48 $\frac{1}{2}$ -lb., or 72 $\frac{1}{4}$ -lb. tins; the 1d. packets in gross and half-gross boxes, in cases of 12 gross; carriage, tins, and cases free. A liberal supply of Show Cards, Glaciers, and printed matter, consisting of Circulars, Medical Testimonials, Press Opinions, and Counter Bills bearing name and address.

Sample, with Terms, free on receipt of Business Card.

FREDK. KING & CO., LIM.
26 WARING STREET, BELFAST, and
3 and 6 CAMOMILE ST., E.C.

COLTHURST & HARDING,



BALL DENOTES
COLOUR OF PAINT.

PHENIX COLOUR WORKS, BRISTOL,
Contractors to the Admiralty, the India Office, and
leading Railway Companies. Manufacturers of

WHITE LEAD, ZINC WHITE,

PAINTS & COLOURS OF ALL KINDS.

MIXED PAINTS READY FOR USE,
In Tins, 1, 2, 4, 7, and 14 lbs. each.

TEREBINE & PATENT DRYERS.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators,
and Japanners.

OIL BOILERS, REFINERS & MERCHANTS.
Export Orders receive special and prompt attention.

TOWER TEA.

INJUNCTION.

IN THE HIGH COURT OF JUSTICE, Chancery Division, on the 23rd July, 1887, the case of THE GREAT TOWER STREET TEA COMPANY, Limited, versus LANGFORD & CO., Plymouth, was decided. Mr. Justice Stirling (without calling upon Counsel for the Plaintiffs to reply) gave judgment in favour of The Great Tower Street Tea Company, Limited, and granted a Perpetual Injunction, with costs, restraining the Defendants from packing their Teas in the manner complained of, or in such way as would lead the public to suppose they were the Teas of the Plaintiffs.



Tower Tea

Registered Trade Marks, Nos. 44,027 and 43,992.

THE ABOVE TRADE MARKS APPEAR ON EVERY PACKAGE.

THE GREAT TOWER STREET TEA COMPANY, Limited, is resolved to protect its Agents in every part of the country, and has instructed its solicitors to proceed in the most peremptory manner against all persons infringing upon its rights. This valuable Agency is a certain source of income—the public ask for the Tea, and Chemist will improve their standing by pushing it.

TOWER TEA is a standard quality. It is widely advertised. Absolutely NO RISK to Agents.

APPLICATIONS FOR THE AGENCY for the Sale of Tower Tea will have prompt attention.

THE LONDON BROKEN TEA	for retail at	1/8
ASSAM CONGOU, New Season's Whole Leaf Tea	,,	1/8
THE LONDON TWO-SHILLING TEA	,,	2/0

THE GREAT TOWER STREET TEA CO., LD.
3 JEWRY STREET, LONDON, E.C.

MITRE TEA.



REGISTERED TRADE MARK.

IN UNIVERSAL REQUEST.
VALUABLE AGENCY.

The Mitre "Broken Leaf" Tea-	-	To Retail at 1/8
The Mitre "Thrift" (Whole Leaf) Tea -	-	1/8
The Mitre "Kee-mun" Mixture-	-	2/-

Wrapped for the Trade in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Parcels.

Framed Show Cards, Enamelled Iron Tablets, Posters, Window Transfer, and Handbills, with Agent's Name on, supplied free. Newspaper and Railway Station Advertisements to suit the requirements of Agents. Applications for Agencies where unrepresented will receive prompt attention. Price Current and Pamphlet, with Terms, post free.

KEARLEY & TONGE, MITRE SQUARE, **LONDON, E.C.**
 ALDGATE,

MAY, ROBERTS & CO.

9 CLERKENWELL ROAD, LONDON, E.C.

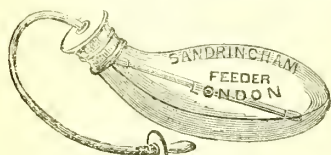
TELEGRAPHIC ADDRESS—"FEEDING BOTTLES LONDON."

CATALOGUE OF DRUGGISTS' SUNDRIES AND PATENT MEDICINES OUT OF PRINT AT PRESENT.

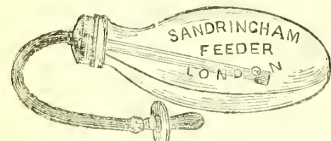
CARRIAGE ON SUNDRIES.—Since 1877 we have allowed 5 per cent. discount on orders for £5 worth of "SUNDRIES" in lieu of Carriage. By this arrangement our Friends are enabled to have enclosures sent with our goods, which they were unable to do when we paid Carriage.

NO TRAVELLERS EMPLOYED — BUYERS ARE THEREFORE SPARED THEIR EXPENSES.
COMPARE OUR PRICES.

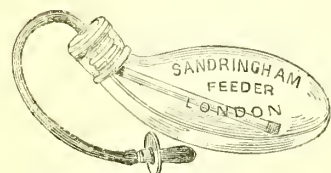
REDUCED PRICES FOR FEEDING BOTTLES.



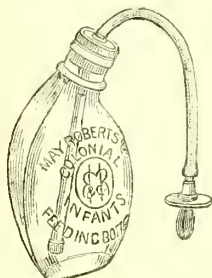
"Sandringham." Earthenware Tops.



"Sandringham." Metal Screw Caps.



"Sandringham." Screw Glass Stoppers.



"Colonial." Earthenware or Wood Tops.

Sandringham (1s.) — WHITE, Earthenware Tops—

With White Fittings, each in box, two brushes ..per doz.	s. d. 6 0
With Black Fittings, each in box, two brushes ..per doz.	6 6
Spare White Fittings ..	3 4
Spare Black Fittings ..	3 10
Spare Bottles	1 9

Sandringham (1s.) — WHITE, Screw Glass Stoppers—

With White Fittings, each in box, two brushes ..per doz.	s. d. 6 0
With Black Fittings, each in box, two brushes ..per doz.	6 6
Spare White Fittings ..	3 4
Spare Black Fittings ..	3 10
Spare Bottles	2 0

Sandringham (1s.) — WHITE, Screw Metal Caps, Nickel plated—

With White Fittings, each in box, two brushes ..per doz.	s. d. 7 0
With Black Fittings, each in box, two brushes ..per doz.	7 6
Spare White Fittings ..	4 0
Spare Black Fittings ..	4 6
Spare Bottles	2 0

Sandringham (2s.) — WHITE, Gilt Porcelain Tops—

With Black Fittings and Spare Glass Tube, Shield and Teat, each in box, two brushes ..per doz.	s. d. 11 6
Spare Black Fittings ..	5 6
Spare Bottles	2 0

Sandringham (3s.) — WHITE, Gilt Porcelain Tops and Cut Glass Stopper—

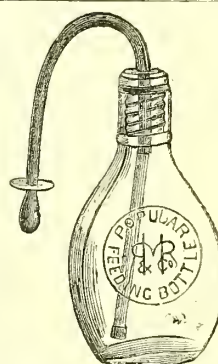
With two sets of Brown Fittings, each in box, two brushes ..per doz.	s. d. 13 0
Spare Brown Fittings ..	7 3
Spare Bottles	7 3

Colonial (6d.) — GREEN, Boxwood or Earthenware Tops—

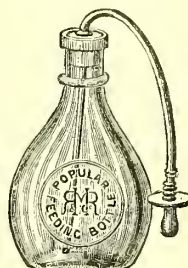
With White Fittings, each in box ..per doz.	s. d. 2 10
With Black Fittings, each in box ..per doz.	3 1
With White Fittings, 1 dozen in box ..per doz.	2 4
With Black Fittings, 1 dozen in box ..per doz.	2 7
If with White instead of Green Bottles ..per doz. 2d. extra	
Spare White Fittings per doz.	1 4
Spare Black Fittings ..	1 7
Spare Green Bottles ..	1 0
Spare White Bottles ..	1 2

Colonial (6d.) — GREEN, Screw Glass Stoppers—

With White Fittings, each in box ..per doz.	s. d. 3 6
With Black Fittings, each in box ..per doz.	3 9
With White Fittings, 1 dozen in box ..per doz.	3 0
With Black Fittings, 1 dozen in box ..per doz.	3 3
Spare White Fittings ..	1 6
Spare Black Fittings ..	1 9
Spare Bottles	1 9



"Popular." Screw Glass Stoppers.



"Popular." Earthenware or Wood Tops.



"Colonial." Screw Glass Stopper.

Popular (6d.) — GREEN, Boxwood or Earthenware Tops—

With White Fittings, each in box ..per doz.	s. d. 2 10
With Black Fittings, each in box ..per doz.	3 1
With White Fittings, 1 dozen in box ..per doz.	2 4
With Black Fittings, 1 dozen in box ..per doz.	2 7
If with White instead of Green Bottles ..per doz. 2d. extra	
Spare White Fittings per doz.	1 4
Spare Black Fittings ..	1 7
Spare Green Bottles ..	1 0
Spare White Bottles ..	1 2

Popular (6d.) — GREEN, Screw Glass Stoppers—

With White Fittings, each in box ..per doz.	s. d. 3 6
With Black Fittings, each in box ..per doz.	3 9
With White Fittings, 1 dozen in box ..per doz.	3 0
With Black Fittings, 1 dozen in box ..per doz.	3 3
Spare White Fittings ..	1 6
Spare Black Fittings ..	1 9
Spare Bottles	1 9

Popular (1s.) — WHITE, Earthenware Tops—

With White Fittings, each in box, two brushes ..per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes ..per doz.	5 0
Spare White Fittings ..	2 6
Spare Black Fittings ..	3 0
Spare Bottles	1 2

Popular (1s.) — WHITE, Screw Glass Stoppers—

With White Fittings, each in box, two brushes ..per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes ..per doz.	5 0
Spare White Fittings ..	2 6
Spare Black Fittings ..	3 0
Spare Bottles	1 9

Colonial (1s.) — WHITE, Earthenware Tops—

With White Fittings, each in box, two brushes ..per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes ..per doz.	5 0
Spare White Fittings ..	2 6
Spare Black Fittings ..	3 0
Spare Bottles	1 2

Colonial (1s.) — WHITE, Screw Glass Stoppers—

With White Fittings, each in box, two brushes ..per doz.	s. d. 4 6
With Black Fittings, each in box, two brushes ..per doz.	5 0
Spare White Fittings ..	2 6
Spare Black Fittings ..	3 0
Spare Bottles	1 9

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

ADVERTISERS' AND BUYERS' REFERENCE LIST AND INDEX TO ADVERTISEMENTS.

ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and NOT at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of page	Foot of page	Foot of page
A	G	N
AL BRAND MENTHOL CONES..... 39	GIBSON, R. Medicated Lozenges 10	NEILL & SON Soap Machinery 3
ALBO-CARBON LIGHT CO. Gas Light Co. 36	GOODALL, BACKHOUSE & CO. Household Requisites and Yorkshire Relish 20	NEW CARBOLIC SANITARY CO. Healthful 40
ALLEN & HANBURY'S Elym (Liquid Malt) COVER	GREAT TOWER STREET TEA CO. 'Injunction' 14	NEWBERRY, F., & SONS. Full Passes 20
APPLEBY & HALSE. Pharmaceutical Chemists 3	GREEN, C., & CO. 'Pepsin. Post. Par.' 41	
APOLLINARIS CO. Hunyadi Janos 10	GRINDLEY & FRANCIS Petroleum Jelly 40	P
	GUERET FRERES Syphons and Aërated Water Plant 11	PETERSON, M., & CO. Sponges 35
ARMBRECHT, NELSON & CO. Text 160, 23		PHILLIPS, G., & CO. Pure Spirits of Wine 13
ATKINSON, B. F. Patent Truss 35		POCOCK, KEEVILL, & CO. Patent Thermo Feeding Bottle 35
ATKINSON, J., & CO. "Zenith Perfumery" 34		
AYER, H. H. Recemic Preparation 34		
AYRTON & SAUNDERS. Funnels 40		
B	H	R
BAGE, T., BLYTON & CO. Medicated Lozenges 32	HARKER, C. R., STAGG & MORGAN Essential Oils 29	RAIT, G. L., F.C.S. Analytical Chemist 40
BARNETT & FOSTER The Niagara Bottle 10	HARVEY, J. & W., & CO. Methyated Spirit 35	RICHFORD, F. M. Indiarubber Type 40
BATTLE, J. R. Vermin Killer 41	HAY, W. Hop Ale Essence 9	RICHTER'S, DR. Pain Expeller TEXT 160
BEIDZLER & CO. Blood Mixture 27	HEARON, SQUIRE & FRANCIS Specialties of the Heron Brand 22	ROBBINS, J., & CO. Methylene 21
BOLE HALL MILL CO. Surgical Bandages 40	HERTZ & COLLINGWOOD Jensen's Cod Liver Oil 22	ROBERTSON, J., & CO. Pill Coating Machine 37
BRACHER & CO. Mixing Apparatus 37	HESELTINE, W., & SON Premier Tea 12	ROBINSON, B. Corn and Wart Pencil 10
BRADLEY & BOURDAS Plate Powder 7	HOMOEOPATHIC HOSPITAL Hospital and School 7	ROCKE, TOMPSITT & CO. Antiseptic Toilet Vinegar 20
BRATBY & HINCHLIFFE Soda-water Plant, &c. 19	HOOPER & CO. Carnabin and Sparkling Seltzer... COVER	
BROMLEY & CO. Woodhall Spa... TEXT 160	HOOP BITTERS CO. (LIM.) Silver Challenge Trophy 28	
BRUMLEY & CO. Pellets of Quinine 26	HORN & SON Trade Mark Agents 40	
BRUMLEY & CO. Pellets of Quinine 26	HOWARDS & SONS Quinine, Alkaloids, & Pharmaceutical Chemicals 25	
BURROUGHS, WELLCOME & CO. Manufacturing Chemists "Don't Fail" 21	HUNYADI JANOS. Waters 10	
C	I	S
CADBURY'S BROS. Cocoa Essence... COVER	IDRIS & CO. Pure Crushed Linseed 40	SANFORD & SON Fat Poison 30
CARTER, H. W., & CO. Soluble Reesence for Mineral Waters TEXT 160	INGRAM & ROYLE Natural Mineral Waters... COVER	SANGER, J., & SONS Kearsley's Widows Welch Female Pills 27
CASSELL, J., & CO. Ceylon Teas 13	ISAACS, I., & CO. Dispensing Bottles 35	SANITAS CO. (LIM.) Kingzett's Eucerin 40
CAVE, JOHNSON & CO. Spring Blossom Ceylon Tea 13		SAUNDERS, J. W. SELF-OPENING TIN-BOX CO. Boxes 35
CHISWICK SOAP CO., J., & CO. Soft Soap 23		SHERWIN, G. E. Grinding Mills 37
CHRISTIE, CARLOS J., & CO. General Commission Agents 31		SHIPKOFF, C. Otto of Rose 34
CLARK, S., & CO. The Syphon Heating Stove 36		SHIRLEY, ARTHUR W. Al Menthol Cones 30
CLARKE, S. Fairy Lamps and Lights 18		SILICATED CARBON FILTER CO. Filters, 33 ... TEXT 160
COLEMAN & CO. Liebig's Extract of Wine 20		SMITH, T. & H., & CO. Soda Mineral Produce CO. Soda Mineral Pastilles 41
COLTHURST & HARDING Paints, Varnishes, &c. 13		SODEN MINERAL PRODUCE CO. Soda Mineral Pastilles 41
CORSAN, J. R. Engraved Window Tablets 35		SOUTH LONDON SCHOOL OF PHARMACY (LIM.) 6
CRAVEN, M. A., & SON Confectionery 32		SOUTHALL BROS. & BARCLAY Accident and Emergency Cases 24
CRITCHLEY, T. Starch Gloss 41		SPRATTS PATENT Veterinary 30
CROUCH, F. B. Damiana Wafers 27		STALLMAN & FULTON, N.Y. Exporters, &c. 30
		STEINIGER & CO. Drugs, &c. 26
		STERN, G., & G. Family Essence 32
		STEWART, G., & CO. Soating Flax 30
		STUTTON, OSCAR & CO. Tooth Blocks Dentifrice 41
		SYMINGTON, T., & CO. Essence of Coffee 4
D	J	T
DA SILVA & CO. Dr. Locock's Wafers 40	JENSEN'S COD LIVER OIL 22	THOMAS, WAKEHAM & CO. 31
DAY & SONS Horse and Cattle Medicines 30	JEWSBURY & BROWN Oriental Tooth Paste 31	TODD, A. M. Crystal White Oil of Peppermint 31
DAY, SON & HEWITT Cattle Medicine Chesis 30		TOWLE, A. P., & SON Chlorodyne 26
DENNISON & CO. Fluid Magnesia 24		TOWSEND, J. Trimming 7
DOWNING, J. S. Coloured Counter Elix 7		TYRRELL, R. C. Perfumery 34
DUKAS & CO. Brushes 35		TYRER, P. Borough Ketchup 13
DUNLOP, MITCHELL & CO. Bottles 35		
DURRANT & CO. Perfumes 40		
E	K	V
ELLIMAN, SONS & CO. Embrocation TEXT 160	KEARLEY & TONGE Mire Tea 15	VACCINE ASSOCIATION, Pure Vaccine Lymph 27
EPPS, J., & CO. Homoeopathic Medicines 32	KIMPTON, H. Practical Manual of Venereal and Generative Diseases 7	VAN ABBOTT & SON Foods 40
EVAN, SONS & CO. Savars Capsules and Cigarettes 24	KING, F., & CO. Edwards' Desiccated Soap 13	
EXCHANGE COLUMN 8	KUHN, B. Papain Fluid... Coloured Sapp. 13	
F	L	W
FELTOW & SONS Line Juice 40	LIVERPOOL SCHOOL OF PHARMACY 6	WESTMINSTER COLLEGE (WILLS & WOOTTON) 6
FLETCHER, FLETCHER & STEVENSON Fletcher's Concentrated Liquors 5	LOISETTE, PROFESSOR Enemas COVER	WOODS, W. M. Arrow Nut Tooth Paste 34
FORD, SHAPLAND & CO. Almanacks for 1888 7	LYNCH & CO. 7	WRIGHT, LAYMAN & UMNEY Wholesale and Export Druggists... COVER
		WYLEY'S COATED OVAL PILLS 29
	M	Z
	MACK, H. Pasta Mack 34	ZIMMERMANN, A. & M. Quinine Sulfate 41
	MACNAIR, J., & B. & CO. Shells, Gums 40	
	MANCHESTER SCHOOL OF CHEMISTRY AND PHARMACY 6	
	MAY & BAKER Others, Refined Campher, &c. COVER	
	MAWSON SWAN & WEDDELL Filters 33	
	MAY ROBERTS & CO. Feeding Bottles 16	
	MEYER, J. A. Compressed Pill Machine 37	
	MCKESSON & ROBBINS Pills 28	
	MELIN, C. New Capsuling Machine 36	
	MERCUS, L. (Amulaj) 24	
	MISCELLANEOUS ADVERTISEMENTS Coloured Supplement	
	MUMFORD, G. S. Crushed Linseed TEXT 160	

CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear are published in one of the other issues of this month.

ACETIC ACID Dunn and Co. Morris and Callard (Salts)	DITTO PLANT [See SYPHONS AND ESSENCES.] Barnett and Foster Bratby and Hinchliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Gueret Freres Tyler, Hayward, and Co.	ALMILAJ Merces, L.	BICARB. SODA Gaskell, Deacon and Co. Howards & Sons May and Baker	BOTTLE CAPS Hunt, W. F., and Co.
AERATED AND MINERAL WTS Apollinaris (Hunyadi, Fried- richshall, and Apollinaris) Barnett and Foster (Spa) Bromley and Co. (Woodhead) Carter, H. W., & Co. (Ginger Ale Essence) Chemists' Aerated Waters Durrant, Geo. & Co. Ellis (Ruthin) Evans, Sons and Co. Harston and Co. Hay, W. Hassall and Co. (Citric Acid Phospho) Hunyadi Janos Idris and Co. Ingram and Royle (Mineral and Vichy, Sauerbrunnen, Carlsbad) Jewsbury and Brown Johannis Mineral Water Co. (Lim.) Mills and Co. (Bonne) Tonnas Spring Natural Mineral Water Co. Taylor, T. and F. J. [See GINGER ALE.]	ABROAD Appleby and Halse Australian Drug Co. Campbell, N. S., and Co. Christie, Carlos, J., and Cia Cocking (Japan) Evans, Sons and Mason (Lim.) (Canada) Felton (Melbourne) Fougères (New York) Kempthorne (New Zealand) Prosser, E. and Co. (Sdny) Roberts (Paris, &c.) Rocke (Melbourne) Sharland & Co. (Auckland, N.Z.) Soul, W. H., and Co. Stallman and Fulton	AMMONIA May and Baker White, A., and Sons	BISMUTH. PREP. Burroughs, Wellcome and Co. Hearon, Squire and Francis Hewlett and Sons Howards and Sons May and Baker Symes and Co.	BOTTLES Barrett, R. H. Barnett and Foster Bratby and Hinchliffe Brett's (Lim.) Brooks, Peel (Perfumers) Curle, J. A. Dunlop, Mitchell and Co. (Tubes) Hearn, E. A., and Co. Isaacs and Co. Kilner Bros. Potts Toogood
	AGENCIES	ANALYSIS Rait, G. L., F.C.S.	BLOOD MIXTURE Beidzler, J., and Co. Lincoln and Midland Counties Drug Co.	BOXES Austin and Co. (Cardboard) Irvin and Sellers Self-Opening Tin Box Co.
	ALKALOIDS Howards and Sons (Cinchona) Smith, T. and H.	APPARATUS Bracher & Co. (Automatic distilling) Brinjes and Goodwin Hughes, C. (Dissolving Views) May, Roberts (Water-bath) Orme (Scientific) Perken, Son and Rayment (Scientific) Rogers, P., and Co. Rothermel, Paul (Vinegar) Southall Bros. and Barclay Wolters, Otto (Balances)	BOOKS Bailey, J. Bell, G., and Sons Churchill, J., and A. Dobell, Dr. James, Dr. Prosser Keene and Ashwell Kington, R. Lewis, H. K. Loisette, Professor Longmans, Green and Co. Robinson, G. H.	BRUSHES Dukas and Co. Evans, Sons and Co. (Tooth Sherlock Bros. Ha Sutton, O., and Co. (Tooth)
		BANDAGES Bailey, W. H., and Son Bole Hall Mill Co. Robinson and Sons	BATH GLOVES Maw, Son and Thompson Sberlock Bros	BUTTER COLR, &c. Bush, W., and Son (Mari- goldine) Johnsen and Jorgensen Oldfield, Pattison and Co. Tomkinson and Hayward
		BEESEW & HONEY Bewdler, and Co. Kemp W., and Son	BOTANIC BEER Newball and Mason	

CAMPBOR

Howards and Sons
Keene and Achwell (Homoeo-
May and Baker (pathic)
Murray, Sir James (Lancet)

CAPSULES

Denoual, J. (Medicinal)
Duncan, Flockhart and Co.
(Cascara Sagrada)
Durrant, F., and Co.
Evans, Sons and Co.
Hooper, B., and Co.

**CAPSULES (ME-
TALLIC)**

Bells and Co.
McLiu, C. (Machine).
CARMINE
Bush, W. J., and Co.
Sellers

CATALOGUE

Evans, Sons and Co. (Price
Current)
Max, S., Son and Thompson
(Price Current)
Newbery and Sons
Sanger and Son
Thompson, Millard and Co.

CHEMICALS

Bush, W., Son and Co.
Dunn and Co.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (Bi-
carbonate of Soda)
Hill and Sons
Howards and Sons Pharma-
ceutical)
Levermore, Aug., and Co.
May and Baker
Morris, Gallard, and Co.
Petri Bros.
Pronk, Davis and Co.
Siern, G. and G. (Pumilius)
Sumner, R., and Co.
Smith, T. and H., and Co.
Tyne and King
Whe, A., and Sons
Zimmermann, A. and M.

CHALK PRECIP.

Dunn and Co.
Levermore, Aug. and Co.
White, A., and Sons
GUMST PROCTERS
Evans, Sons and Co.
Leiritz
Maw, Son and Thompson
Wood, V.

CHLORATE OF

POTASH
(Compressed Tablets)
Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLORIDE OF

LIME
Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.

CHLORODYNE

Bliton-Bage and Co. (Twen-
low's)
Burroughs, Wellcome and Co.
Devenport (Browne's)
Freeman, B.
Thomas, Wakeham and Co.
Twite A. P.

CHLOROFORM, &c.

Duncan, Flockhart
Macfarlan, J. F.
Petri Bros.
Smith, T. and H.
Zimmermann

CITRIC ACID

Hassall's (Phospho)
Nasco, Aveline and Co.

COCAINE

HYDROCHLOR

Howards and Sons

COCA WINE

Armbricht, Nelson and Co.

COCA & CHOCLE

Cadbury
Fry (Malted)
Van Houten's Cocoa

COD-LIVER OIL

Allen and Hanbury's
Burgoyne (Pepelaine)
Burroughs, Wellcome
Hertz & Collingwood (Jensen's)
Smith, T. J.
Woolley, Sons and Co.

COFFEE

Syngleton and Co. (Coffee
Essence)

COLLAPSIBLE

TUBES
Bells and Co.
Brooks, H., Peel and Co.

COMBS

Sherlock Bros.

COMPOSITION

ESSENCE
Potter and Clarke

COMPRESSED MDONS

Allen and Hanbury's
Burroughs, Wellcome and Co.
Hooper, B., and Co.

**CONCENTRATED
LIQUORS**

Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Keith, B., and Co.
Thompson, H. A., and Son

CONFECTIONERY

Bage, Blyton and Co.
Craven and Son
Gibson, B., and Sons
Soden Mineral Pastilles
Robinson, B.

CORN CURES

Robinson, B.

COTTON WOOL

Haynes G. & Co. (Absorbent)
Robinson and Sons (Absorbent)
Sanger, J., and Sons

DENTIFRICES

Jewsbury and Brown
Newbery and Sons
Sutton, O., and Co.
Thompson and Capper
Woods, W. (Areca Nut)

DISINFECTANTS

Government Sanitary Co.
National Chemical Co.
New Carbolic Sanitary Co., Ltd.
Sanitas Co.

DOG MEDICINES

Spratts (Patent)

DRUG & SPICE

MERCHANTS
Steiniger and Co.

DRUGGISTS' SUN.

Ayrton and Saunders
Barclay and Sons
Evans, Lescher and Webb
(Hawley's Counter Adjuncts)
Evans, Sons (Savers)
Hill, A. S., and Son
Idris and Co.
Lynch and Co.
May, Roberts and Co.
Newbery, F., and Sons
Sanger and Son
Schutze and Co.
Sherlock Bros.
Soul, W. H., and Co.
Thompson, Millard and Co.
Toogood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

Ayrton and Saunders
Pronk, Davis and Co.

EFFERVESCENT

Allen and Hanbury's (Saline)

ELECTRIC APPAR.

Darton, F., and Co.
Orme and Co.
Colthart & Harding (Electric
Light Oil)

EMBRICATION

Elliman, Sons and Co.

ENEMAS

Bailey, W. H., and Son, (Appa-
ratus)
Ingram and Son
Lynch and Co.
Sanger and Son

ENGRAVERS

Barker, W., and Son

ESSENCES, FRUIT

AND SOLUBLE
Brady and Hinchliffe
Burgoyne, Burdidge and Co.
Bush, W. J., and Co.
Bush, W., Son and Co.
Carter, H. W., and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattison and Co.
Stevenson and Howell
Tyne and King
Vogt, G.
Woolley, Sons and Co.

ESSENTIAL OILS

Bush, W. J. (Lemons, &c.)
Cocking (Japan Peppermint)
Evans, Sons and Co.
Jackson, J., and Co.
May and Baker
Nasco, Aveline and Co.
Rocke, Tompitt (Eucalyptus)
Stallman and Fulton
Stevenson and Howell
Synnes and Co.
Todd, A. M.
Vogt, G.
Warrick Brothers
Wright, Layman and Umney

ETHER

Duncan, Flockhart and Co.
(Chloric)
Howards and Son
May and Baker
Robbins
White, A., and Sons

EXTRACT, MEAT

Brand and Co.
Coleman and Co.
Liebig Co.
Liebig's Wine Co.
Viking Food and Essence Co.

EXTRACTS, FLUID

Allen and Hanbury's
Barker, J., and Co.
Burgoyne, Burdidge
Evans, Sons & Co.
Fletcher, Fletcher & Stevenson
Hearon, Squire and Francis
Oldfield, Pattison and Co.
Potter and Clarke

EUCALINUM

Rocke, Tompitt and Co. (Anti-
septic Poultice and Vinegar)

FACE POWDERS

Chubb, J., and Co. (Violet)

FEEDING BOTT.

Hearn, E. A., and Co.
Kilner Bros.
May Roberts and Co.
Pocock, Kevel and Co.
Savars
Thompson, Millard
Toogood, W.

FILTERING

Doulton and Co.
Dunlop, Mitchell and Co.
Hearon, Squire and Francis
Slack & Brownlow
Slighted Crbn Fltr Co.

FLY PAPERS

Ford, Shapland and Co.

FOAM PRODUCERS

Bush, W. J., and Co.

FOOD (Infants & Invalids)

Allen and Hanbury's
Benger's Pancreatised
Brand and Co. (Fisting)
Burroughs, Wellcome (Penton-
Goodall, Parkhouse and Co.
Hearon, Squire and Francis)
International Patents Associa-
tion (Dr. Meil's Health Biscuits)
Kinz, F., and Co. (Dessicated
Soup)
Lazouzi, E., and Son
Mottershead and Co. (Benger's
Food)
Nestle, H.
Spring and Co. (Kek)
Van Abbott (Diabetic)

GINGER ALE

Harston and Co.
Hay, W. (Essence)
Mills, R. M.

GLYCERINE

Fink
Martindale, W. (Nitro-Glyc-
erine Tablets)
Price's Candle Co.

GRANULAR PREP.

Bishop, A., and Sons
Bush, W., and Co.
Evans, Sons and Co.
Hearon, Squire and Francis
Wright, Layman and Umney

GUMS

Fink (Arabic, &c.)
Pronk, Davis and Co.

GUTTAPERCHA

Duncan, Flockhart

HÆMORRHOIDS

OR FILES
Bayley and Co.

HAIR PREP.

Ayer, H. H. (Racemier)
Bates, E. W. (Fritzetta)
Capper, W. B. (Crimdons)
Chesbrough Mfg. Co.
French Hygienic Co.

HERB BEER EXTS.

Newball and Mason
Potter and Clarke

HERBALISTS

Butler, McCulloch and Co.
Newball & Mason (Ext. of Herbs)
Potter and Clarke

HOMOEOPATHIC

Eppe and Co.
Keene and Ashwell
Leath and Rose
Thompson and Capper

HONEY

Kemp and Son

HOP ALE ESSENCE

Hay, W.

HOSPITALS

London Homoeopathic

HYPHOPHOPITES

Duncan, Flockhart and Co.
Dunn and Co.
Fellows
Fletcher, Fletcher & Stevenson
Symes & Co.
Tyne and King
Vestman, F. J.

INK [See MASKING.]

Jewlay and Draper
Duncan, Flockhart

INHALERS

Sprone, The, Co., Ltd.
Toogood, W.

INSECTICIDES

Sanford
Steiner and Co.

KETCHUP

Tyrer, F.

LAMPS, LIGHTS, &c.

Albion Carbon Gas Light
Clarke, Samuel ("Fairy")

LANOLINE

Burroughs, Wellcome and Co.

LARD

Ewen, J.

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Felton and Sons (Speciality)
Idris and Co.
Montserrat (See Evans)

LINSEED

Idris and Co.
Kemp, W., and Sons (Crushed)
Mumford, G. S.
Nell, R. J.

LINT

Liverpool Lint Co.
Newsome (Surgeons)
Robinson and Sons
Seabury and Johnson

LOZENGES

Allen and Hanbury's
Blyton, Bage & Co. (Medicated)
Craven, M. A., and Son
Evans, Sons and Co.
Gerson, E., and Sons (Manf.)
Hill and Son
Martindale, W. (Nitro-Glyc-
erine Tablets)
Warrick Brothers

LOOFAHS

May, Roberts and Co.

MACHINERY

Bracher and Co.
Brinjes and Goodwin
Burroughs, Wellcome and Co.
Carter, J. H.
Dale, J., and Son
Melin, C. (Capsuling)
Pindar (Mill)
Sherwin
Werner and Pfeiderer

MAGIC LANTRNS

Hughes, C.
Perken, Son and Rayment

MAGNESIA

Bishop, A.
Dunford
Henry, F. and H. (Calcined)
Murray, Sir James (Lind)

MALT EXT., ETC

Allen and Hanbury's
Burroughs, Wellcome and Co.
(Malt Extract "Kepler")
Eckell
Hearon, Squire and Francis
Liebig's Wine Co.
Paterson's Chemical Manu-
facturing Co.

MENTHOL

A 1 Menthol Depot, A. W.
Shirley, Proprietor
Banner, E. R.
Cocking and Co.
Evans, Sons and Co.
Hockin Wilson and Co.
Newbery and Son
Shirley
Todd, A. M. (Crystal Oil of
Peppermint)

MARKING INKS

Barber, G., and Co. (Crimson)
Christian, J.

MEDICINE CHSTS

Burroughs, Wellcome and Co.
Day, Son and Hewitt (Veterin.)
Day and Sons

MERCURIALS

Bush, W., and Co.
Howards and Sons
May and Baker

METHYLATED

SPIRITS
Burroughs, J. W., and Co.
Harvey, J. & W., and Co.
Jones and Co.
Macnair, J. & D.
Phillips, G., and Co.

METHYLENE

Robbins, J., and Co.

MICROSCOPES

Darton, F., and Co.
Perken, Son and Rayment

MIXING MCHNRY

Bracher and Co.
Brinjes and Goodwin
Burroughs, Wellcome and Co.
Carter, J. H.
Sherwin, G. E.
Werner and Pfeiderer

MORPHIA

Macfarlan, J. F., and Co.
Smith, T. and H.
Wink, J. A., and Co.

MUSTARD

Banner, E. R. (Oil)
Johnson, J. H. and S. (Ess. Oil)

NIGHT LIGHTS, &c.

Clarke, S.

OILS, PAINTS, &c.

Binghamton Oil Refining Co.
Colhurst and Harding
Gregory, W. (Devonshire Oil)
Vogeler, The Charles A., Co.
(St. Jacob's Oil)

OINTMENT BASES

Bayley's
Binghamton Oil Refining Co.
Burgess, E. (Lion Ointment)
Burroughs, Wellcome & Co.
(Lanoline)
Chesbrough (Vaseline)
De Pass, E. A., & Co. (Petrolina)
Grindley (Petroleum Jelly)
Singleton's Eye Ointment

PAINTS [See OILS.]

PAPAIN FINKLER

Kuhn, B.

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Horn and Son

PATENT MEDCNS.

Armbricht, Nelson & Co. (Coca
Wine)
Atkinson (Infant Preserv)
Barclay and Sons (General)
Bayley's (Tablets, &c.)
Beck, A. N. (Beck's Hop Bitters
Beecham (Pills)
Beddler, J., and Co.
British College (Morrison's)
Burgess (Eucalyptus, &c.)
Crouch, F. H. (Wafers)
Edwards and Son
Evans, Lescher (Hawley's
Counter Adjuncts, Coated
Pills, &c.)
Fennell's (Powders)
Hirst, Brooke, and Hirst
Holloway (Pills and Oint.)
Hop Bitters Co.
Kemp, W. H. (Whoopoline)
Lalor (Phosphoryl, &c., &c.)
Lincoln (Clarke's Mix.)
Locock, D. R. (Wafers)
Lynch and Co.
May, Roberts and Co.
Newbery and Sons
Powell, T. (Balm of Anised)
Ratti and Co. (Mephrosine)
Richter's, R. (Pain Expeller)
Roberts (Foreign)
Savars
Singleton's Eye Ointment
Soul, W. H., and Co.
St. Dalmas (Bronchial, &c.)
Swift Specific Co., The
Thompson, Millard and Co.
Vogeler, The Charles A., Co.

PERFUMERY,

FANCY SOAPS.

[See Eau de Cologne.]
Atkinson, J., and Co.
Ayer, H. H.
Barclay and Sons
Biggleston, E. R.
Becknell, Turner and Co.
Burroughs, Wellcome and Co.
Chesbrough Manufacturing Co.
De Pass & Co. (Peach Blossom,
Durrant, Geo.
Evans, Sons and Co.
Ewen (Sons)
Hall's Wood Violet
Greenall, T. B., and Sons
(Mona Bouquet)
Mack, H.
Mann, C. A., and Co.
Newbery and Sons
Patey and Co.
Pear's Soap (Dirty Bly)
Sainsbury, S. (Lav. Water)
Sanger and Sons
Treat, R. C.
Warrick Brothers
West, T. (Ocell's Moss)
Whitaker & Grossmith
Woolley, Sons and Co. (Powder)

PEPPERMINT

Jackson, J., and Co.
Todd, A. M. (Crystal White
Oil of Peppermint)

PEPSINE, &c.

Burroughs, Wellcome and Co.
Fletcher, Fletcher & Stevenson
Newbery (Inglavin)
Warner

PHARM. PREPS.

Allen and Hanbury
Barron, Squire and Co.
Benger's
Blyton, Bage, and Co.
Burgess, Willows, Francis
Burgoyne, Burdidge
Burroughs, Wellcome Various
Duncan, Flowerhart
Evans, Sons and Co.
Fletcher (Lqrs. for Syrups)
Hearon, Squire and Francis
Hewlett and Sons
Hill and Son
Hooper, B., and Co.
Howards and Sons
Keith (Conc. Tinctures)
Martindale (Nitroglycerin)
Sellers, J.
Southall Bros.
Tybke & King
Wink, J. A., and Co
Woolley, Sons
Wyleys (Various)

PILLS (Coated, &c.)

Allen and Hanbury (Schief-
feline) (Pearl Coated)
Barron, Harvey and Co.
Becham, Thomas
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Sons
Hooper, Dr.
McKesson and Robbins Oval-
captioned
Morrison and Co.
Newbery and Sons
Sanger, J. and Sons
Smith, W. F.
Southall, Bros. and Barclay
Warner, W. R. (Coated,
Wyleys and Co.

PILL MACHINES

McFerran, J. A.
Pindar, J. W.
Robertson, J., and Co (Coating)

PODOPHYLLIN, &c.

Keith, B. and Co.
Smith, T. and H.

PORCELAIN GDS.

Poths, H., and Co.
Toogood (E.C. Pots, regist.)

PUMILINE

Burroughs, Wellcome and Co.
Stern, G. and G.

POLISHING

Baumgartner (La Brillantine)
Bradley, Bourdas (Albatum)
Chancellor and Co. (Stove)
Oakley, John, and Sons

PRINTING

Bowers Bros.
Ford, Shapland and Co
Silverlock, H.
Townsend, J. (Exeter)

QUININE SALTS

Brumleau, C. (Pelletier's Quinine)

Howards and Sons
Zimmermann
RENNET

Benger's (Essence of)
Johnsen and Jorgensen

SACCHARINE

Allen and Hanbury
Burroughs, Wellcome and Co.

SALICINE

Macfarlan and Co
Smith, T. and H., and Co.

SAUCES, PICKLES

Goodall, Backhouse and Co.
Lazenby (Harvey's)
Tyler, P.

SEA SALT

The Maldon Crystal Salt Co.

SCHOOLS OF**PHARMACY,****HOSPITALS, &c.**

Edinburgh Classes
Liverpool School
London Homoeopathic and
Medical School
Manchester College
South London School of
Pharmacy, Lim.
The School of Pharmacy
Tully, J.
Westminster College

SEALING WAX

Stewart, G., and Co.

SEIDLITZ POWDERS.

Chubb, J. and Co

SELTZOGENES

Evans, Sons, and Co.
Idris and Co.

Mav, Roberts and Co.

SHEEP DIP

Grindley and Co.

SHAVING

Dukas and Co. (Brushes)
Hovenden (Euxesie)
Lloyd, A. S. (Euxesie)

SOAP (SOFT, &c.)

Brecknell, Turner and Sons
Chiswick Soap Co.
De Pass and Co.
Pears' Soap
Whitaker and Grose-Smith

SHOP FITTERS

Bygrave, J. and V.
Evans, Sons and Co. (Show
Crystals)
Howlett, S.
Natali, E. (Show Cases)
Vates, W. S.

SPECTACLES

Botwright and Grey
Darton, F., and Co
Raphael and Co

SPIRIT

Boord and Son
Burroughs (Pure & Methyl)
Harvey, J. W., and Co.
Jones and Mason (Methyl)
Macnair, J. & D.
Phillips and Co.

SPONGE

Burroughs, Wellcome and Co.
Cresswell Bros.
Cresswell, R., and Co
Evans, Sons and Co.
Peterson, M.
Schutze and Co.
Sherlock Bros. (Sponge Bags)

STAMPS (RUBBER)

Pollard, A. W.
Richford, E. M.

STOPPERS

Austin and Co. (Sprinklers)
Barnett & Foster (The Eclipse)
Brooks, Peel (Sprinklers)
Lazenby, E., and Son (Barrett's
Patent)

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
De Pass and Co.
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Marks, A. A. (Artificial Limbs)
Newsome, C.
Robinson and Sons
Schutze and Co.
Thompson, Millard and Co
Woolley, Sons and Co.
Wood, Vincent

STARCH

Critchley (Gloss)

STOVES

Clarke, S., & Co. (Gas Heating)

STROPHANTHUS

Burroughs, Wellcome and Co.

SUGAR

Gibson, R., and Sons

SYPHONS

Barnett and Foster
Idris and Co.

SYRINGES

De Pass and Co.

SYRUPS

Fletcher, Fletcher (Liquors)
Idris and Co.

TEA

Cassell, J., & Co.
Cave, Johnson and Co.
Gt. Tower St. Tea Co.
Heseldine, Wm., and Son
Kearley and Tonge
Pearse and Wheatley
Spinner and Co.
Walker and Dalrymple

TEREBENE

Burroughs, Wellcome and Co.
Hearon, Squire and Co.

THERMOMETERS

Bailey, W. H., and Son
Darton, F., and Co.
Perken, Son and Raymen
Schutze, F., & Co.

TIN CANISTERS

Noakes, B., and Co.

TOILET REQUISITS

Downing, J. S. (Paper and Fix-
tures)
Rocke, Tompsett and Co.
(Toilet Vinegar)

TOOTH PASTE

Jewsbury and Brown
Sutton, O., and Co. (Block)
Woods, M. (Arecia)

TRADE MARKS

Horn and Son

TRUSSES

Bailey, W. H., and Son
Colwell, H. M.
Haywood, J. H.
Lynch and Co.
Schutze and Co.

TYPE-WRITING

Facsimile Apparatus Co.
Pollard, A. W.
The Universal "Simplex"
Type-Writer

URETHANE

Howards, Sons and Co.

VARNISH

Colthurst and Harding
Fronk, Davis and Co

VACCINE LYMPH

A Association for the Supply
of the Pure

VALUERS AND**TRNSFR. AGNTS**

Baker, P. C.
Urridge and Co.
Tomlinson and Sons

VERMIN KILLERS

Battle, J. R.
Sanford and Son
Steiner and Co.

VETERINARY

Corner, R. (Devonshire Oils)
Day and Sons
Day, Son and Hewitt
Gregory, C. W.
Gregory, W.
James, Lieut.
James, R. J. (Bilester)
Spratts (Dogs)

VINEGAR

Rehermel (Making)

WAFERS

Crouch, F. B. (Damiana)
Locock, Dr. (Pulmonie)

WHOLESALE & EXPT**DRUGGISTS**

Allen and Hanbury
Barron, Squire and Co.
Burgess, Willows
Burgoyne, Burdidge
Bush, W., Son and Co.
Evans, Leecher and Webb
Evans, Sons and Co.
Evans, Sons and Masor (Lim.)
Harker, Stagg and Morgan
Hearon, Squire and Francis
Hewlett and Son
Hill and Son
Oldfield, Pattison and Co.
Potter and Clarke (American
&c.)
Southall Bros. and Barclay
Sumner, R., and Co.
Symes and Co.
Thompson, Millard and Co
Thompson, H. A., and Son
Woolley, Jas., Sons and Co
Wright, Layman and Umne
Wyleys and Co.

WINES AND SPTS

Boord and Son
Coleman and Co.
Durrant, G. (Orange)
Goodall, Backhouse and Co.
(Quinine Wine)
Idris and Co.
Ingram and Royle
Leibig's Wine Co.
Phillips, G., and Co. (Pure
Spirits of Wine)
Robinson, B. (Orange)

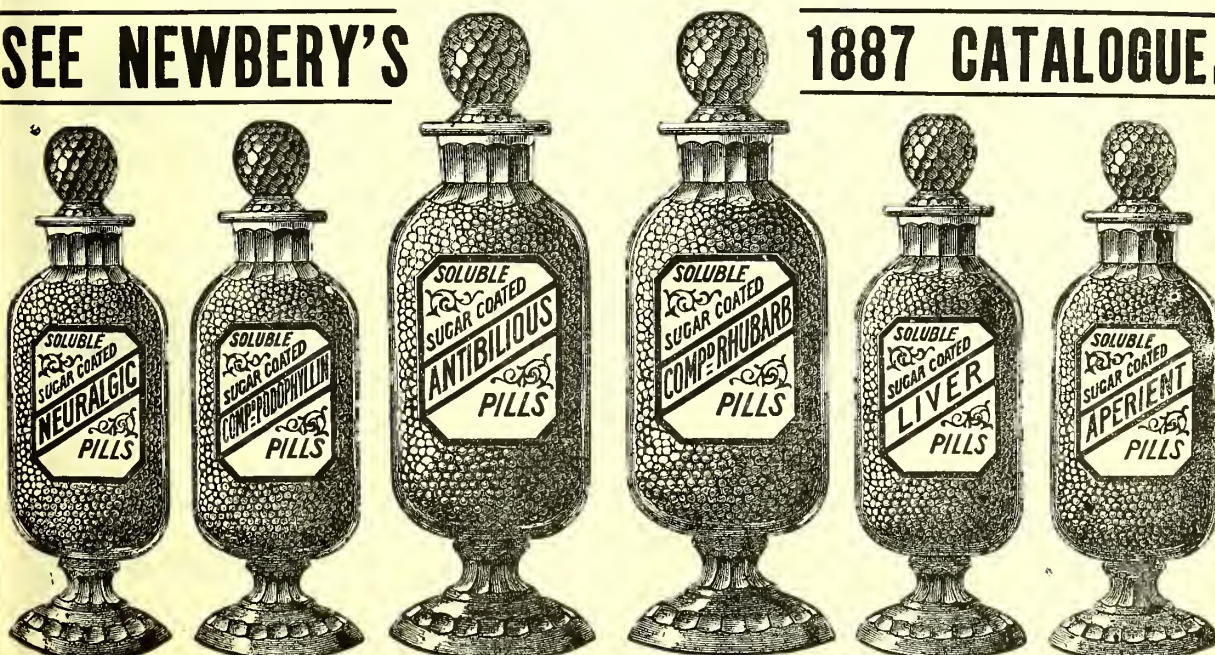
NEWBERY'S OVAL PEDESTAL PILL VASES

REGISTERED PATTERNS.

PRICES MATERIALLY REDUCED.

SEE NEWBERY'S

1887 CATALOGUE,



Label Design Registered under Trade Marks Act.

Vases supplied with Pills only.

TO THE
CHEMISTS & DRUGGISTS
OF
GREAT BRITAIN.

TELEGRAPHIC ADDRESS: *St. George's, Middle St.,*
COLEMAN, *NORWICH,*
December, 1887.
GEORGE'S, NORWICH.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.

P.S.—We are willing to pay the entire cost of a Retail Licence (the holder of which can sell any kind of Wines) if an assorted order of 12 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** still commands a very large sale.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,
ST. GEORGE'S, NORWICH,
AND 3 NEW LONDON STREET, LONDON, E.C.
20

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S
HOUSEHOLD SPECIALITIES.

Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s. and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate and name, GOODALL, BACKHOUSE & CO. No other is genuine.

Goodall's
Baking Powder

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

Goodall's
Quinine Wine

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottles, 6d., 1s. and 2s. each.

Goodall's
Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in Boxes, 2d., 6d., and 1s. each.

Goodall's
Blanc Mange Powder

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blanc-mange may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d. and 1s. each.

Goodall's
Egg Powder

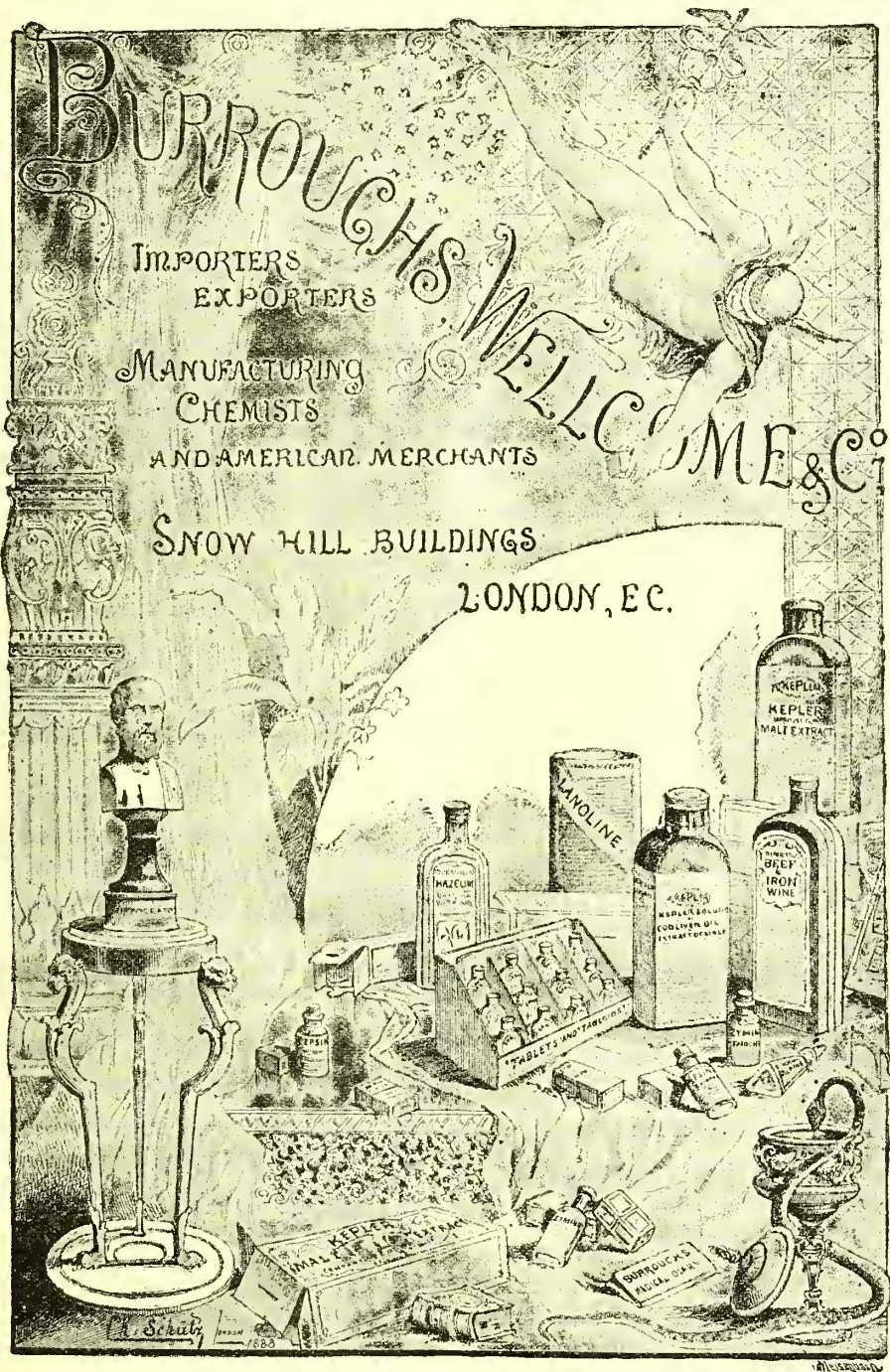
Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One sixpenny tin will go as far as twenty-five eggs. In 1d. Packets; 6d., 1s., 2s. Tins.

SOLE MANUFACTURERS—

GOODALL, BACKHOUSE & CO.,
WHITE HORSE STREET, LEEDS.

A monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

BURROUGHS WELLCOME & CO



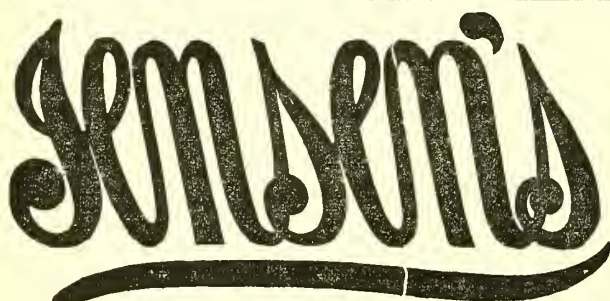
SNOW HILL BUILDINGS, E. C.

DON'T FAIL!!!!!!

To read EVERY WORD of our 9 $\frac{3}{4}$ Pages of Advertisements in last week's "CHEMIST AND DRUGGIST." Our intention is to make our advertisements as interesting and profitable reading as anything that could be printed in the body of any trade journal, and many assure us that we are succeeding in our ambition.

For instance, the trade will find it interesting and profitable to know of our new and attractive styles of "Tablets" and "Tabloids" of Compressed Drugs, which are now more popular than ever, and which sell well whenever shown in the new glass front boxes, containing 1 doz. oval screw-stoppered bottles, assorted, or otherwise; also of our prices for Antipyrin (for which our house is headquarters), in crystal powder and tabloids, and medical reports upon the same. Of the improvements in manufacture of Lanoline and of the Toilet Lanoline in tubes, which will soon be ready for sale. Of our reduced prices of Tinct. Strophanthus, which render it more profitable and satisfactory to the trade to supply than to manufacture; of the improvement in the preparation of Hazeline; of the advantages of using Fairchild's Pepsin in Scales or Powder, and of supplying Cod Liver Oil in Solution; and finally, of our offer of a Physicians' Prescription Case and Therapeutic Leaflets (bearing chemist's name), which are of much interest to the medical profession.

Yours faithfully,
BURROUGHS, WELLCOME & Co.



(ICEBERG BRAND)

COD LIVER OIL

The only Oil in the World guaranteed as made solely from perfectly fresh Livers, and therefore sweet and pleasant to taste and smell.

Guaranteed non-congealable, and not liable to repeat.

Jensen's Iceberg Brand, in bottles only, to retail at 1s., 2s., 3s. 6d., & 6s. 6d.

Cod Liver Oil supplied in the Original Barrels and in Winchester, to retail under Chemist's own name.

HERTZ & COLLINGWOOD, 101 LEADENHALL STREET, LONDON.

Beaumont, Squire & Francis,

WHOLESALE AND EXPORT DRUGGISTS,

MANUFACTURING PHARMACEUTICAL CHEMISTS.



Established at 95 Bishopsgate Street 1714.

Specialities of the "Heron" Brand.

Belfast Ginger Essence.

Lemon Flavour.

Lime Juice Cordial.

Sol. Ess. Capsicine.

Sol. Ess. Lemon.

Sol. Ess. Ginger (Jamaica).

Cucumber Essence.

Cucumber Cream.

Cucumber Pomade.

PHARMACEUTICAL PREPARATIONS IN VAGUO.

5 COLEMAN STREET, LONDON.



ESTABLISHED 1859.

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICE:

NORMANBY CHAMBERS, MELBOURNE.

Published every Saturday.

Subscription 10s. per year, payable in advance:

commencing from any date.

Post free to every country in the world. Single copies, 4d. each.

Supplied only to persons connected with the Trade.

For Australasian subscribers the subsidiary journal THE CHEMIST AND DRUGGIST OF AUSTRALASIA is included.

Literary Contents.

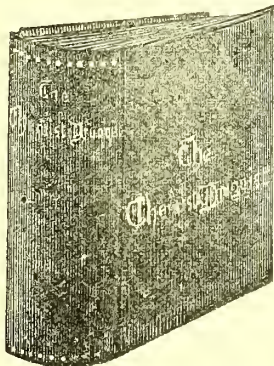
	PAGE		PAGE
Asbestos	165	Editorial Notes (cont.):—	
Bankruptcy Reports	156	Doctors' Fees; Moot Points	
Correspondence:—		Regarding Ipecacuanha ..	161
The Brompton Hospital Pre-		The Liability of Brokers	162
scriptions; Mr. Ince's For-		French Pharmaceutical News..	166
mulae; Loocek's Lotion;		Gazette	164
Shop Decoration; Clearing		Laboratory Notes	165
Waste-water Pipes; A		Leaderettes	163
Chemical Ink; Pharmaceu-		Legal Reports	163
tical and Medical Opinions	172	New Companies	164
Unserupulous Use of the		Obituary	167
Telephone; Price of Quin.		Pharmaceutical Society of	
Sulphas.; Mineral-water		Great Britain:—	
Manufacturers and their		Council Meeting	149
Charges for Bottles; Store		Examinations	152
Suppliers	173	Post-card Competition: Shake-	
Dispensing Notes	173	spearian Pharmacy	157
Legal Queries	174	Provincial Reports	146
Miscellaneous Inquiries	175	Purity of the Salts of Bismuth	165
Editorial Notes:—		Reviews	164
The Pharmacopœia and the		Trade Notes	152
Sale of Food and Drugs		Trade Report	168
Act	160		

POST-CARD COMPETITION, 1888.

No. 2.

MR. BLANK, chemist and druggist, Dull Town, wishes to commence advertising in his local paper in March next, and will give a guinea for the best suggestion for a two-inch advertisement in the columns of the paper. Specimens in competition to reach the Editor of THE CHEMIST AND DRUGGIST before the end of the current month—to be drawn up on post-cards. Special articles may be advertised, or the announcement may be general in its terms.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



THE CHEMISTS' AND DRUGGISTS' DIARY for 1888 is out of print.

THE PHARMACY ACT AMENDMENT BILL is to be re-introduced. We print the draft of it in our report of the Pharmaceutical Council proceedings. The President's speech will show wherein and why it differs from the Bill of last year.

POISONING CASES.—On Monday a young woman named Fanny Hiley was charged at the Retford Police Court with having taken a quantity of tincture of aconite from which she had recovered. She was cautioned and discharged. At Middlesborough, on the same day, Henry Coates, a married man who had had some domestic trouble, was charged with having tried to commit suicide with laudanum and oil of almonds which he had bought from Mr. Harrington, chemist, alleging he wanted it for a liniment. He was remanded for a week, the stipendiary remarking that it was an extraordinary thing that more rigorous restrictions were not put on the sale of poisons. At Wrexham also laudanum failed in its effects in the case of Mary Roberts, who took it in her trouble on account of her poverty. At Romford last week Thomas Sparrow, a bricklayer, died through taking liniment in mistake for medicine.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA, published monthly at our Melbourne office, can be supplied to subscribers outside Australasia at 5s. per annum, payable in advance, and commencing at any date. Chemists interested in the drug trade and the pharmaceutical affairs of the Australasian Colonies will find a full record of all events affecting their occupation in *The Chemist and Druggist of Australasia*. Single copies can be supplied at 6d. each. Application should be made by English or American subscribers to the office at 42 Cannon Street, London.

DIARY FOR NEXT WEEK.

Secretaries of societies are requested to send early information of approaching meetings.

Monday, February 6.

Society of Chemical Industry (London Section), Burlington House, at 8 P.M. Dr. H. E. Armstrong, F.R.S., on "The Alkaloids: A Review of the Synthetic Methods of Preparing 'Closed Chain' Azo-carbon Compounds"; Mr. Lewis T. Wright, C.E., on "Studies in Coal Distillation." Royal Institution, at 5 P.M. General monthly meeting.

Tuesday, February 7.

Royal Institution, at 3 P.M. Professor G. J. Romanes, M.A., on "Before and After Darwin."

Wednesday, February 8.

Pharmaceutical Society, 17 Bloomsbury Square, W.C., at 8 P.M. (1) Mr. Peter MacEwan, on "Sandal-wood Oil"; (2) Mr. Edward Cullinan on "The Study of the Principles of Elementary Mechanics in a Pharmaceutical Curriculum."

Royal Microscopical Society (King's College, W.C.). Address by the President (Rev. Dr. Dallinger, F.R.S.)

Sheffield Pharmaceutical and Chemical Society, at 8 30 P.M. Mr. J. O. Arnold, F.C.S., on "The Present Position of Toxicology."

Junior Pharmacy Ball, Willis's Rooms.

Thursday, February 9.

Royal Institution, at 3 P.M. Professor C. H. H. Parry, M.A., on "Early Secular Choral Music."

Chemists' Assistants' Association, at 9 P.M. Musical and social evening.

Friday, February 10.

Royal Institution, at 9 P.M. Mr. W. H. Preece, F.R.S., on "Safety-lamps in Collieries."

Saturday, February 11.

Royal Institution, at 3 P.M. Lord Rayleigh on "Experimental Optics."

ADVERTISEMENTS of employers and assistants can be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

ASHTON-UNDER-LYNE.

NEIGHBOURS.—While Mr. Edwin Fisher, chemist and druggist, of this town, was cleaning the lower part of his shop windows in Stamford Street on January 24, a dog belonging to a neighbouring shopkeeper, a Mr. Seel, came out of the shop, and seized Mr. Fisher by the leg, and bit him. Mr. Fisher was driving the dog away, when Mr. Seel came to the door, and Mr. Fisher told him he should get rid of it, otherwise he (Mr. Fisher) would. Thereupon an altercation ensued. Mr. Fisher, seeing the dog approaching again, rushed at it, and was stooping to drive it away or catch it if he could. Upon this Mr. Seel ran from his shop door, kicked Mr. Fisher into the middle of the street, struck him on the head, and knocked off his cap, and thereupon the two men commenced struggling. The result of the struggle which took place was that Mr. Seel got Mr. Fisher's head "in chancery," and walked off with him, being the stronger man, into his own shop, and he there struck him several times. He thumped his head upon a counter, and otherwise mauled him, being assisted by Mrs. Seel, who got struck by Mr. Fisher during the struggle. The result was that at the Ashton Police Court on Monday a charge of assault was preferred by Mr. Fisher against Mr. Seel, and there was a cross summons by Mr. Seel against Mr. Fisher. The fight was fought over again with witnesses, and two smart lawyers as sponge-holders, the result being that the magistrates dismissed both cases.

BIRMINGHAM.

SMALL-POX AT HEDNESFORD.—An outbreak of small-pox has occurred at a house in Wood Lane, Hednesford, occupied by a newly-married couple, named Price, and another family. The Local Board have appointed a committee to rent a suitable building for the reception of patients suffering from the disease. The medical officer has been instructed to issue notices in reference to the outbreak, and to take such other steps as he may consider necessary to prevent the spread of the malady.

THE MANUFACTURE OF GAS.—Mr. C. Hunt, M.I.C.E., read a paper on "Gas Manufacture" at a meeting of the Birmingham students of the Institution of Civil Engineers held at the Colonnade Hotel on Monday evening. Mr. Hunt briefly described the circumstances attending the invention of the distillation of coal-gas for lighting purposes, and then, by means of a beautiful series of models and diagrams, explained the methods of gas-production now adopted at the large gas works of Birmingham and other places. The lecture was a very able one, and was greatly appreciated.

WART-CHARMING EXTRAORDINARY.—A well-known and old-established firm of chemists in the town are doing a lucrative trade in charming away warts. Their *modus operandi* is somewhat novel. A person calls upon them who happens to be inconvenienced with an abundance of these ugly excrescences. The principal partner in the business gravely examines the warts, counts them, and instructs the patient to depart and return in a week's time. The order is obeyed, and when the individual makes his appearance on the second occasion, the chemist places on each wart a piece of bacon which he has prepared in the interim, indulges in a solemn incantation, tells the patient he must not thank him, and quickly walks away. The warts are said to wither away in the course of a few days afterwards.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—The fourth monthly meeting was held at the Grand Hotel, Colmore Row, Birmingham, on January 26, at 8.30 P.M., Mr. G. E. Perry, president, in the chair. There was a fair attendance, and the following papers were read:—"Casual Laboratory Notes," by R. A. Cripps; "Note on the Purity of the B.P. Salts of Bismuth," by Mr. G. Lloyd; and Mr. Prosser sent some conserve and syrup jars for inspection, with some interesting notes thereon, which in his absence were read by

Mr. F. H. Alcock. A painted portrait, said to be of Van Helmont, was subjected to a close inspection. It was lent by Mr. Corfield. Votes of thanks were accorded the authors for their papers, and to Mr. Corfield for the loan of the picture.

BRIGHTON.

PRESENTATION.—On Thursday evening, January 26, the directors and officers of the Brighton and Southern Counties Permanent Building Society entertained to dinner in the restaurant at the Brighton Aquarium Mr. W. D. Savage, J.P., who for twenty-two years had held the office of chairman of the society. In proposing the health of Mr. Savage, the chairman (Alderman H. Davey, J.P.), on behalf of the subscribers, presented him with a valuable marble time-piece in recognition of his services as chairman of the board. Alderman Davey paid a high tribute to the superior manner in which Mr. Savage had performed the duties. Mr. Savage suitably replied. During the evening cabinet photographs of Mr. Savage were distributed amongst the guests, and Mr. Savage said he should be pleased to add his autograph to them.

IRELAND.

POLITICS AND BUSINESS.—The following are cut from the *Belfast Morning News*:—

"A protest against the arrest of Father M'Fadden.—All supporters of Balfour's Lunatic Law are hereby informed that I will not supply them with goods nor transact any business with them from this date.—Patrick Stuart, the National League Drug Store, 29 Raglan Street, Belfast."

"Falls Road and District Nationalists can buy their drugs from a Brother Nationalist, at the National League Drug Store, Raglan Street."

THE PROPOSED PHARMACY ACT AMENDMENT BILL.—The Belfast Pharmaceutical Chemists' Association sent out a circular a month ago to all the 300 persons named on the last Irish Pharmaceutical Register. The circular stated that it was the intention of the Pharmaceutical Council to register, illegal sellers of poisons throughout Ireland up till 1887, instead of only registering *bona-fide* chemists and druggists *i.e.*, those who were trading as such at 1875, whereby a host of illegitimate traders, having neither claim nor qualification, will be thrown into business, to the great danger of the public and the serious injury of pharmaceutical chemists; and then asked the addressees to sign the following:—"I am of opinion that the Pharmaceutical Council of Ireland should only register '*bona-fide* chemists and druggists,' or druggists—*i.e.* those who were trading as such at the passing of the Act of 1875—but no others." We are informed that a "considerable majority of the whole number of pharmaceutical chemists on the register" have signed this opinion; and our information states further that some have written in addition that they would prefer to register none of the chemists and druggists, while some offer subscriptions to assist the opposition. The Belfast Association have submitted these facts to the Irish Pharmaceutical Council, respectfully suggesting to them "that they proceed no further, in the meantime, with the proposed Amendment Act; but that they endeavour to enlarge the membership of the Pharmaceutical Society so as to make it, as far as possible, co-extensive with the number of its licentiates. The Council would then fully represent their licentiates, and, united by common interests and cordial sympathy, would go forward harmoniously to secure such further legislation as might be found necessary or desirable, confiding in the moral and material support of their constituents to any well-considered measures for the advancement of pharmacy and the promotion of the interests of those engaged in it. If, however, in the face of these facts, and ignoring all that has been accomplished during the past twelve years, the Council persists in thus hastily going to Parliament for legislation on the lines they have laid down, which are dangerous to public safety and unjust to pharmaceutical chemists, this association intends to continue its opposition by all the legitimate and constitutional means now at its disposal."

The Bill, we understand, is drafted, and was considered by the Pharmaceutical Council at their last meeting. We also learn that the pharmaceutical chemists of Dublin are to hold a meeting shortly to support the action of the Council.

LEAMINGTON.

CHEMISTS' DINNER.—The chemists of Leamington held their annual dinner on January 25. The subject of "cutting" in dispensing, which has just been started by one of the brethren, was discussed. It was agreed not to make any change in the present dispensing charges, and a feeling was expressed that unity was the chief thing to aim at.

LIVERPOOL.

LIVERPOOL CHEMISTS' ASSOCIATION.—The annual meeting of the Chemists' Association was held on January 26 at the Royal Institution, Colquitt Street. There was a fair attendance of members. Mr. A. C. Abraham announced the election by the council of Mr. Albert H. Samuel, F.C.S., as president for the year, and said he had very great pleasure in greeting Mr. Samuel as his successor. Mr. Samuel, who was received with loud applause, then took the chair. After the minutes of the previous meeting had been read and confirmed, and about a dozen fresh members elected, Mr. J. S. Ward, the hon. secretary, read

The Annual Report,

which stated that the Liverpool Registered Chemists' Trade Society had been amalgamated with the association. New rules had been drawn up by a joint committee, under which the Chemists' Association would undertake the functions hitherto performed by the two associations. During the year thirty-eight new members had joined the association, and twenty-one members and three associates had either resigned or been struck off, leaving the numerical strength at the present time 103 members and four associates. The hon. treasurer (Mr. R. M. Sumner) reported a balance in hand to the credit of the association of 8*l.* 9*s.* 10*d.* The meeting next proceeded to the election of thirteen new members to the council, instead of four, as hitherto, the successful candidates being Messrs. G. Alexander, John Bain, M. Conroy, F.C.S., J. R. Day, B. Dickens, J. Hocken, F. J. Mackinlay, J. J. Smith, A. Stewart, C. Symes, Ph.D., J. S. Ward, F.C.S., Councillor J. Woodcock, and H. Wyatt. The President then read his inaugural address on

The Origin of Petroleum.

He fully explained the most important theories to account for its formation in the earth, which, he said, were known as the organic and inorganic theories. The former theory considered that petroleum was the result of the slow natural distillation of organic matter, both animal and vegetable, that had been deposited in strata of former epochs of the earth's history, chiefly those of the Silurian and Tertiary periods. The latter, or inorganic theory, traced the origin of petroleum from the direct influence of carbonic acid and water, which infiltrate the earth's crust, on metals—such as iron, &c.—far down in the interior of the earth. He stated that it has been frequently asserted that at no very distant date the world's petroleum supplies would be exhausted, and therefore the question of its original formation has an important bearing, as, if the organic theory be the accepted one, the generation of petroleum has been practically completed. If, on the contrary, the inorganic theory be the true one, we have conditions which are perpetually renewed and continuous, and at present active. In conclusion, he stated that the rise and progress of the petroleum industry had been the most remarkable and rapid of any branch of commerce of modern times, and it had exercised a marked influence on modern civilisation. To recount the uses to which it was now applied was not within the scope of the paper. It was sufficient to say that, as the cheapest and one of the most brilliant illuminants yet discovered, it had added largely to social comfort and happiness. It had enabled poor workpeople to considerably extend their hours of labour, thereby increasing their power of wage-earning. It was rapidly displacing all other illuminants. As a lubricant, it had superior qualities to all animal or vegetable oils, owing to its freedom from oxygen, as well as its cheapness in comparison with these oils. Its use as the cheapest of fuels was of the first importance, although we might say it was as yet in its infancy for that purpose; but that it would ultimately largely displace coal in the merchant and naval marine of all nations was, in his opinion, certain. A vote of thanks was passed to the President.

MANCHESTER.

EXPERIENCE.—A chemist in this city has adopted the style of label shown below, which has caused some amusement among other members of the trade here.

POWDERED

JALAP

F. SAUNDERS, Chemist,
LONGSIGHT.(Late Assistant to four
Physicians, five Surgeons, ten
Chemists, two Dispensaries,
one Infirmary, and sixteen
Drug Shops.)

THEFT OF A WATCH FROM A CHEMIST.—At the City Police Court on Tuesday last, before the Stipendiary, an old man named Richard Broadley was charged with having stolen a watch from Mr. John Fielding, a manufacturing chemist, of New Mills, Derbyshire, on September 3, 1882. The watch was valued at 17*l.*, and was lost by Mr. Fielding on leaving the Bellevue Gardens with two nieces, one under each arm. The chain, which was also stolen, had not been recovered. William Rose, a publican, living at Padiham, said he bought the watch from prisoner for 10*l.* He had worn it about eighteen months, and then he handed it over to the Padiham police. The prisoner was committed for trial.

CHEMICAL ENGINEERING.—Dr. Grossmann read a paper on this subject to a large meeting of the Owens College Chemical Society on Tuesday evening. Professor Schorlemmer, F.R.S., presided. The lecturer remarked that the subject of the paper had received an unfortunate name, but it was not easy to suggest a title that should be at the same time brief and not open to objection. Dr. Grossmann then proceeded to compare the conditions of working in the laboratory and the works. In the laboratory, he said, time and expense went for very little, and every sacrifice was made that purity of the product might be secured; on the other hand, in the works it was necessary to work in the most economical way, and small traces of impurity could be neglected, provided they did not interfere in the purpose for which the product was to be used. The various conditions which obtained in works were illustrated by an outline of the principal processes by means of which a raw product was transformed into the final form, as supplied to the market. An interesting discussion followed as to the higher teaching in chemistry in its relation to technical applications.

NEWCASTLE-ON-TYNE.

SUCCESSFUL PRELIMINARY STUDENTS who wish to record the fact in their local papers will find the following letter a model out of the beaten track which such notices get into. We take it from the *Newcastle Daily Journal*:—"Mr. George E. Kent, 12 Priestpope Street, Hexham, pupil of Mr. Robert Wilson, member of Edinburgh University Council, Sandyford Academy, Nixon Street, Newcastle, successfully passed the Preliminary pharmaceutical examination held in this city on the 10th inst. Mr. Kent achieved this result after the study of ten weeks only." Few will be able to beat this ten weeks' record; but the question is what was Mr. Kent three months ago?

EXTRAORDINARY ACTION BY A LADY.—The London correspondent of the *Irish Times* says:—"I had it yesterday, from one of the counsel retained in the case, that a very curious litigation is listed for hearing during the present term. Some two years ago a North London doctor, having a large family practice, had on his list of patients a lady long suffering from an affection of the face and jaw, which baffled the arts of the faculty. She had been for some time under his care when she changed her residence from London to Newcastle-on-Tyne, but kept herself in the hands of her London doctor by letter. Finding the ailment obstinate and the patient somewhat intractable and hypochondriacal, the doctor wrote in the end, saying he had exhausted his resource, and adding his opinion that the *edax rerum* was the only remedy. The dead language was matter in the wrong place. It proved a snare, for the lady hied herself off to a local chemist, and applied for the specific as set forth in the letter. The attendant—it will be contended, through deliberate dishonesty—made up a bottle, for which he charged 7*s.* 6*d.*, and

at the patient's request registered, or pretended to register, her name in the shop-book as a customer to whom the remedy was to be regularly supplied. She continued using and paying for the sham medicine for over a year and a half; and a curious point in the case will be her admission that it gave her more relief than any previous remedy employed. Coming to London for the Royal Jubilee, she chanced to meet her former doctor, who, it should be said, had told her in his letter that, being unable to do more for her, he did not feel justified in continuing the correspondence. He was astonished to find himself gratefully thanked for his final advice, and still more astonished when the lady related the facts. He wrote at once for an explanation, and advised the patient to demand the return of the large sum she had paid in fancy prices for the nostrum. The next stage of the business began with the disappearance of the assistant and the denial of any responsibility of the chemist. On these main facts the case is based, but some remarkable revelations of the human capacity for consuming doctor's stuff may be expected. The plaintiff has, it seems, been an invalid from her twentieth year, and has for the quarter of a century intervening paid for medicine alone over 2,000*l*."

SHEFFIELD.

THE SMALL-POX EPIDEMIC continues to monopolise the attention of the public. The letter-writing section continue to make vague guesses as to its cause, and suggest absurd measures for its cure. The Archbishop of York has formulated a prayer for the special use of the plague-stricken town, and this proceeding has called forth pungent criticism from the Rev. Dr. Dallinger, the eminent microscopist, who devoted a sermon to the subject last Sunday, quaintly putting the remedies for the prevailing epidemics somewhat in this fashion, "Pray for the removal of small-pox and use a water filter for lead-poisoning."

LOCAL NATURALISTS.—At a meeting of the Naturalists' Club, held on January 27, Mr. A. H. Allen read an interesting paper on some local natural history collections, in the course of which he stated that the collection of plants made by Mr. Thomas Salt, and presented to the Sheffield Literary and Philosophical Society, contains from 1,790 to 1,820 plants, some of which have long since disappeared from the neighbourhood. Another ardent botanist is Mr. John Turner, a steel hardener, of Attercliffe, who, during the past thirty years, has devoted the whole of his leisure time to the study of botany, and who has a knowledge of local plants and general structural botany probably not inferior to that of any living Sheffield botanist. He is an accomplished microscopist, and is the possessor of an instrument of a value not less than 50*l*. or 60*l*.

WIGAN.

MEDICAL ENTERPRISE.—A vacancy having occurred in certain medical officerships and societies, the doctors of the neighbourhood have been competing for the appointment. The following has been published as one of the circulars issued to the members:—"Wigan. Dear Sir,—I am fortunate enough to have at my service Dr. —, a highly-qualified physician and surgeon. His skill and kindness have, during the past year, made him a general favourite with the people. He lives with me in the same house. Between us, I promise you, we shall be able and willing to attend to all patients, both from far and near, in the five or six miles limits. I find that by each carrying a case of urgency drugs and instruments, we can relieve, on the spot, patients in pain and dangerously ill, and thus improve on the system of branch surgeries, which I have tried and given up as doing more harm than good to patients, because they waste time, scatter one's efforts, and do not contain all the needfuls. One may be waiting at a branch surgery when wanted urgently at Aspull; or, having arrived at Haigh, another patient is in great pain in Pemberton. When there is a main surgery as headquarters in the centre of the district, telegrams, urgent messages, and post cards can be sent, and will find one of us on the spot, and ready to drive to where pain and disease are making the attack. One man can only do a certain amount of work, and he cannot be in two places at the same

time; so that it is necessary that the assistant be a first-class man, or you will find your mistake out when sickness comes upon you."

SCOTLAND.

ABERDEEN.

THE City Surgery (Dr. Crow) waits to consult with the British workman, and supply him with medicine all for a shilling. We wait the sixpenny man's arrival.

MR. JAMES WHYTE is to open a shop at the south-west corner of Rosemount Viaduct, and a prospector is looking after one at the north-east corner. Surely the butter will be spread thin enough soon. We are fast reaching the boast of some southern cities—"A chemist for every lamp-post."

THE "BANFF NATURALIST'S" COLLECTION.—When Thomas Edward felt that his life was drawing to a close, he wrote in his own peculiarly characteristic style to Ex-Dean of Guild Walker, asking him to offer his whole collection to the council as representing the citizens of Aberdeen. The council were proud to become the custodians of the devoted naturalist's collection, gathered during a long life and under hardships that, but for "Smiles," would have remained unknown to almost his immediate connections.

EDINBURGH.

ROYAL SOCIETY.—At the meeting of this society, held on Monday, amongst the papers read was one by Mr. D. B. Dott and Dr. Stockman, in which they defended the generally-accepted formula for morphine. The following foreign scientists were elected honorary fellows of the society:—Rudolph Julius Emmanuel Clausius, Professor of Natural Philosophy in the University of Bonn; Ernest Haeckel, Professor of Zoology and Histology in the University of Jena; and Demetrius Ivanovich Mendelëff, Professor of Chemistry in the University of St. Petersburg.

MEDICAL DEGREES.—The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow have presented a petition to the Privy Council praying for a charter under which the combined bodies would be enabled to grant medical degrees on the same principle as the Colleges of Physicians and Surgeons of London desire to grant degrees. It is proposed that there should be a body under the name and style of "The Senate of Physicians and Surgeons of Scotland," elected by the colleges, faculty, and certain teachers of medicine. Degrees are proposed to be granted to those who, by passing the examinations formerly held by either of the colleges or the faculty separately, or by passing the conjoint examination of the combined bodies, or by passing any other examinations to be held by them, shall acquire the qualifications for registration under the Medical Act. The provision is made retrospective. The degrees proposed are Bachelor of Medicine, Bachelor in Surgery, Doctor of Medicine, Master in Surgery, and Doctor of Sanitary Science. As this is the third petition which the Privy Council has before it for power to grant degrees, it is probable that none of them will be granted.

Chemists, says one of them, must be very easily satisfied to have put up with the ordinary pill-box so long. The lids often stick, and when pulled off in many cases cause the contents to be scattered far and wide, thereby provoking strong language. Pharmacists would perhaps like a box containing a slide in the lid, which would admit of the passage of one pill at a time.

THE SILICIAN SULPHUR INDUSTRY has long been in a very bad way, and recently the principal producers, under the auspices of the Girgenti Chamber of Commerce, met at Palermo to consider their position and devise means for its amelioration. It was suggested that the different taxes, such as registration royalty and income tax, now levied upon the mines and their proprietors, should be abolished, that public warehouse for the storage of the product should be erected, and that 100,000 tons of sulphur should provisionally be taken out of the market to lighten the available stock.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE Council met on Wednesday, February 1, at 11 A.M., the President (Mr. Michael Carteighe) in the chair. All the other members of the Council were present except Messrs. Baildon and Evans.

The minutes of the last meeting were read and confirmed.

A RESIGNATION.

The Secretary announced that he had received intimation from Mr. Hampson, who is not favourably disposed to the building scheme, that he would no longer act on the building committee.

Mr. RICHARDSON remarked that the Council was sorry to lose a cabinet minister.

RETIRING COUNCILLORS.

A lot was next taken to determine which of the fourteen members elected last May would retire at the end of the current year of office. As usual this momentous event was accomplished amidst considerable merriment. The balls drawn from the pool by the President indicated that the following gentlemen will retire. We give the order as the balls were drawn:—

Walter Hills, London.
J. G. F. Richardson, Leicester.
Charles Symes, Liverpool.
R. Hampson, London.

J. Robbins, London.
G. Evans, Llanely.
S. R. Atkins, Salisbury.

The following retire by rotation:—

C. B. Allen, London.
A. Bottle, Dover.
T. P. Gostling, Diss.
T. Greenish, London.

W. V. Radley, Southport.
G. F. Schacht, Bristol.
G. S. Woolley, Manchester.

Those who retain office for another year are—

H. B. Baildon, Edinburgh.
E. N. Butt, London.
M. Carteighe, London.
W. G. Cross, Shrewsbury.

G. T. W. Newsholme, Sheffield.
W. D. Savage, Brighton.
Alfred Southall, Birmingham.

THE REGISTRAR'S REPORTS.

According to custom, Mr. Bremridge, as Registrar under the Pharmacy Acts, submitted his report of the condition of

The Registers of Pharmaceutical Chemists and Chemists and Druggists, 1887.

Additions during the year:—		Erasmus during the year:—	
Number of persons who have passed the—		Deaths:—	
Modified Examination ..	1	Notices from registrars ..	178
Minor ..	506	Other sources ..	47
Major ..	62*	Erased at the request of registered persons themselves ..	5
Number of persons registered on payment of the registration fee, having been in business before August 1, 1888 ..	8	Increase of numbers on the register ..	233
Number of persons restored to the register on payment of a fine ..	6		
	521		521

* These having already been included in the number who passed the Minor, do not increase the numbers on the Register.

Number of Pharmaceutical Chemists on the Register, December 31, 1887	2,135
Number of Chemists and Druggists	11,534
	13,749

At the same time he submitted his report of the numerical strength of the Society, and of the results of the examinations for 1887. These showed that the Society consisted on December 31, 1887, of the following:—

Life members	213
Ph. C.	1,515
C. and D.	652
Associates in business	1,279
Associates } not in business	936
Apprentices }	1,125
Total	5,691

A comparison of these figures with those of previous years is given on another page.

THE EXAMINATION RESULTS

for 1887 showed the following:—

Preliminary Examination.—The number of candidates examined was 1,373; of these 720 passed and 653 failed, or a percentage of failures amounting to 47.56.

Modified Examination.—Only three candidates were examined (in London), and one of them passed.

Minor Examination.—A total of 1,082 candidates were examined, 506 of whom passed and 576 failed. Of these 867 were examined in London, 462, or 53.28 per cent., failing. In Edinburgh 215 were examined, 114, or 53.02 per cent., failing. The results at the different boards therefore agree more closely than hitherto.

Major Examination.—Ninety-four candidates were examined. Of these only 7 appeared in Edinburgh, 4 of them, or 57.14 per cent., failing. The remainder were examined in London, with the result that 59 passed and 28 failed. The percentage of failures (32.18) is, therefore, much smaller than in the northern centre.

The London Board, with an average attendance of 15.67 examiners, accomplished the examination of 957 candidates in thirty-one days, and the Edinburgh Board, with an average attendance of 8.17 members, examined 222 candidates in seventeen days. There are 14 members on the London and 8 on the Edinburgh Board. The President and Vice-president are *ex officio* members of both boards.

Printed copies of the report were on the table, and

Mr. RICHARDSON, evidently afraid that it would be taken as read and passed without comment, asked if there would be no discussion upon it.

The PRESIDENT moved that it be entered on the minutes of the Council.

THE SOCIETY RETROGRESSING.

This was the text adopted by Mr. HAMPSON, who opened a discussion on the report. He was of the opinion that such an important document should not be passed without some expression of opinion, for it was just like taking stock and showed them where they were. He had found with regard to numerical strength that during the last five years they had decreased to an important extent, and that fact ought to make them consider as to the causes of the decrease. They ought to discover why the Society was losing strength, for after all a society might be rich, but if it were poor as to numbers it could not be said to be strong, and his belief was that they should have a more numerous membership than they had at present. He found that during the past five years the number of pharmaceutical chemist members had decreased by 117, and the chemist and druggist members by 98, or a total of 215. What he would like to learn was, what was the cause of this diminution of strength? There were several causes: first, the Society was not popular, and, second, in consequence of criticism—absurd criticism, he might say, on this matter. Many of the members of the Society retired because the Society did not please them. He held that that was an absurd excuse, for if the Society did not please them they could remedy matters by retaining their membership. (Hear, hear.) He did not doubt that the Society was inefficient in some departments, but many of the inefficiencies were uncontrolled, and he appealed to all who had the power to join to come into the ranks as soon as possible. It was the only society connected with the trade in the country, the only society which had control of pharmaceutical politics, and as such it was a short-sighted policy for any pharmaceutical chemist to remain outside. This diminution of their strength was a matter greatly to be deplored, and he hoped that some means would be discovered whereby they could stop it. (Hear, hear.)

Mr. SYMES agreed with much that Mr. Hampson said, but, while actual membership was decreasing, he wished to point

out that in the course of the five years there had been an increase of ninety-two associates in business; and although there appeared to be a considerable decrease of members, there was an increase among the younger members, and that was cheering. (Hear, hear.) Of the decrease amongst the members, he wished to say that it included some who were in business before 1868, and they could only look for decreases in this department. Nevertheless, he supported Mr. Hampson in appealing to outsiders to join in order to remedy the things of which they complained.

Mr. HAMPSON, again rising, said he wished to point out that the decrease acted on the needs of the Society and its Council, which could only be recruited from members; and if this process of thinning went on, they would not be able to carry on the work of the Society.

Mr. RICHARDSON expressed his indebtedness to Mr. Hampson for opening up the discussion. It was distressing, he said, to see the Society decreasing year by year. Some years ago—but not many—Mr. Greenish hoped that two blades of grass would grow where one did, but that had not taken place. They required more pharmaceutical chemists—more of those who had an ambition for the higher title—and he trusted that there would be more seeking after the diploma. Then he was of the opinion that every person who was worthy of going into business should be enabled to take a share in the management of the Society: there should be some scheme for making associates in business eligible for membership of the Council. The Council should be in touch with every member of the trade, but there was a feeling in the country that the journal did not meet the requirements of the trade: it was too scientific, and consequently there was no material inducement for young chemists to join the Society. Referring to the register, he said it was not correct. He noticed the name of one man as residing in Leicester who left it ten years ago. The Secretary should put an asterisk against the names of those who did not reply to his letters, as was done in the Medical register.

Mr. BREMIDGE (Registrar), replying, said that the Medical register did not contain such marks. It was done in the "Medical Directory," a private book. He kept the register in conformity with the Act of Parliament, and could not go outside of that.

Mr. SYMES said that, if Mr. Richardson knew of any inaccuracies in the register, it was his duty to inform the Secretary; in fact, the Secretary asked for corrections, and with each copy of the register sent a form for corrections.

Mr. RICHARDSON did not see what he had to do with that.

Mr. SYMES: No, but the local secretary should see to it.

The PRESIDENT said that the answer to Mr. Richardson was that the Registrar had got to do this according to Act of Parliament. It was his custom to send registered letters from time to time, and if these letters were not returned, purely he (the Registrar) could conclude that the letters had been delivered to the persons to whom they were addressed, and there his responsibility ended. He also wished to point out that the register should not be taken as a directory, for it only pretended to be a list of the names of certain persons.

Mr. Cross, continuing the discussion on the decrease in the membership, appealed to all members to go out amongst chemists and ask them to join. It was the only society for chemists; and as the future of pharmacy depended upon brotherhood therein, more should come into the brotherhood.

Mr. BOTTLE believed that Mr. Cross had hit the nail on the head. The proper thing was for every one to do every thing in his power to get people to join. He was glad to see the increase in younger members, but he was not satisfied that this increase was as large as it might be, and thought it wanted looking into.

Mr. NEWSHOLME agreed with much that had been said with regard to young men, and felt that the number who tried the Major now was too small. He wished that young men while they were at their studies would go forward for the higher title. He was one of those who thought that provision should be obtained for making associates in business eligible for seats at the Council; and as soon as the Pharmacy Bill was out of the way he hoped there would be an attempt to get an alteration of titles, and a provision for associates. If they offered greater inducements they would have a larger membership.

Mr. HAMPSON asked the Secretary how many of those who passed the Major examination did not join the Society.

The SECRETARY: Quite a few. Out of sixty-two passed last year about fifty-nine have joined. (The latter figure was afterwards reduced to 57.)

Mr. RADLEY also spoke of the necessity for making associates in business eligible for membership of the Council.

Mr. ROBBINS believed with Mr. Newsholme that the inducements were the key to the position, but he was of opinion that they gave all the inducements to outsiders and little to the members. He would not give outsiders, numbering 10,000 or so, invitations to the conversation and other privileges, but would let them know that they would get all these things by joining.

Mr. HILLS begged to correct Mr. Robbins's figures. There were only 9,400 chemists and druggists who were not connected with the Society. He did not think that the falling off was so great as it might appear. There was an increase on one side.

Mr. ATKINS followed on the same lines. He thought that the question of titles had something to do with the decrease, and being of opinion that as competition grew there would be a much larger proportion of men who would be content with the qualifying examination, thought there must be a levelling of the requirements for membership of the Society. He was also in favour of a degree being given to those who satisfied the higher requirements; but, on the whole, he was not despondent, and saw glimmers of light in the darkness.

Mr. ALLEN said that they must be prepared for the gradual retirement of all the chemist and druggist members, and it was a great comfort to him that nearly all who became pharmaceutical chemists joined the Society. After quoting the figures regarding associates and apprentices, he pointed out that, if these were deducted from the decrease, the actual decrease was small.

Mr. BUTT said that they had to go back to the beginning of the Society to see through the matter. He accordingly went to the beginning and explained the various phases of the Society's development, with a view to show that in the membership department decrease is natural. It was all, in his opinion, a process of dying out, but the fact that new members were provided by examination showed that there would be sufficient material left for carrying on the work of the Society. At the same time he believed that the question of giving associates full powers would have to be considered in the future.

The VICE-PRESIDENT remarked that associates have all the powers of members except the right to sit at that table.

The PRESIDENT, in closing the discussion, said that there were certain people who would always find a reason for not joining the Society, and those who said that they would not join because they could not be made members did not, in his opinion, have a valid excuse. He hoped that the time would come when men would join the Society because it was good for the whole. It was a little heartrending that chemists and druggists could not be made members of the Society; but that was owing to the opposition there had been to the 1868 Act. There was a large number of people—candidates—who considered that, having got their qualification, they were not called upon to do anything more. They were not sufficiently educated in the true sense as to the requirements of the whole craft. The question of getting all who passed eligible to become members would have to be considered in the future. A point had been referred to at last meeting—viz., that all who passed should as a matter of course be members of the Society. He thought that would be grand, and before it was accomplished they would have to do two things—raise the Minor men and lower the Major. He put that point clearly to them: before they made members of Minor men they would have to satisfy those who constituted half the numerical strength of the Society—viz., those of the higher grade. He had hopes that that would be done more successfully than in 1868, when the same question had been considered.

Mr. SYMES remarked that the Council had drafted a Bill in which provision was made for Minor men becoming members.

Mr. RADLEY said he did not ask that they should be made members, but that associates in business should be eligible to become councillors.

The PRESIDENT saw that, but thought that the idea that class could only represent class was erroneous. There were plenty of pharmaceutical chemists who could represent the opinions of the Miner men. Having informed Mr. Richardson that about one-half of examined men on the register are connected with the Society, the President obtained the authority of the Council to minute the Registrar's report.

VOTE OF CONDOLENCE.

The PRESIDENT, referring to the death of Professor de Bary, and in moving a vote of condolence with the members of his family, said that those who took an interest in biology, and especially in cryptogams, would greatly regret to hear that Dr. de Bary, one of their recently elected honorary members, had succumbed to a disease which had first manifested itself when the professor attended the last meeting of the British Association. Dr. de Bary had been one of the greatest authorities in his special subject, and although he might not have been known personally to some of them, he was well known to German pharmacists. The motion was seconded by the Vice-President, and agreed to.

FINANCE.

The report of the Finance Committee referred principally to routine matters. In moving its adoption the President said that 1,000% of consols, the last portion of 3,000% authorised to be sold, had been disposed of. He also called attention to the fact that, after considerable difficulty, they had got returned to them by the Inland Revenue authorities the income-tax on the ground rents belonging to the Benevolent Fund.

BENEVOLENT FUND.

Six cases had been considered, and in two of these grants were recommended, viz., one of 5% and one of 15%. The others were not entertained. The committee recommended that the question of considering the advisability of instituting a personal canvass amongst London chemists and druggists on behalf of the fund should be referred to a small committee.

The VICE-PRESIDENT moved the adoption of the report, and explained that by a personal canvass was implied the employment of a special agent for the purpose, or of an extra clerk. The small committee would decide which course would suit best.

The motion, after a few remarks, was agreed to. Before the next business was taken up the PRESIDENT said that he had before him the accounts of the North British Branch, and he wished to say that they were very satisfactory.

LIBRARY, MUSEUM, LABORATORY, AND HOUSE COMMITTEE.

The librarian and curator had reported on their departments. The committee recommended a grant of 50% to the Sheffield School of Pharmacy. The arrangements for the Redwood scholarship were considered and further delayed.

The PRESIDENT moved the adoption of the report, and in doing so spoke of the grant to Sheffield. The Council, he trusted, would agree to this. The school was a deserving one; but he would like to say that its fees were rather low, and he hoped that the local committee would consider the advisability of raising them. He did not believe in making education too cheap; it was not appreciated so much as when students felt that they had to pay for it.

Mr. HAMPSON supported the motion, and spoke of the advisability of the Sheffield school being affiliated to Firth College. Something similar had been done in Owen's College, Manchester.

The PRESIDENT, continuing, said he had not finished. The report also contained a reference to the Council examination prizes. It was felt by the committee that it was not at present expedient to allow candidates to attend at any of the preliminary examination centres instead of at Edinburgh and London. In Edinburgh during the past seven years only four candidates had appeared for the examination. That showed that the local necessity was not great. There were other considerations which had weighed with the committee, and on the whole he thought the decision was wise.

Mr. RICHARDSON supported the grant to Sheffield, and thought that this was an excellent way of spending the Society's money. He believed in small fees and in taking

advantage of local institutions. They had done both in Leicestershire, and their efforts had been extremely successful.

Mr. SYMES regretted that the committee had decided to retain the old method of conducting the examination for Council prizes. It was within his own knowledge that if candidates were allowed to attend local centres they would have had two at Liverpool on the last occasion.

Mr. SCHACHT also considered the decision unwise. He apologised for not being present at the committee meeting, and said that the cause which kept him away was the one which kept candidates away from Edinburgh and London. (Laughter.) He hoped that the decision would yet be reversed, and felt that it would be when the curriculum made educating centres busier. When that was so they should have to put the prizes at disposal as widely as possible. (Hear, hear.)

Mr. ALLEN, as one of the committee who was present, said that they had to take into consideration the fact that previous committees had considered the matter with all particulars before them and had decided against it. He thought the Jacob Bell scholarship examination was a parallel case. From the hundreds who were eligible for that only some 30 or 40 competed. Of the 50 or more Major men eligible for the Council prizes only 6 in 1886 and 11 in 1887 competed. Could they expect more by increasing the number of centres?

Mr. SYMES thought so. Of the 30 or 40 Jacob Bell men the majority attended the provincial centres. If these centres did not exist there would not be so many.

Mr. ATKINS said that one objection to allowing the Pereira medal being competed for as Mr. Symes would wish, was that at some of the centres there had been evidence that the examination was not so carefully supervised as it might be. It would be a serious matter if the value of the blue ribbon of pharmacy were hazarded by such practice.

Mr. SOUTHALL agreed with Mr. Symes, and was of opinion that the Preliminary was as well conducted in the provinces as it was in London.

Mr. NEWSHOLME said that the vote of 50% would give satisfaction in Sheffield. The local committee had the question of fees under consideration, but he might say that the fees were fixed at a low rate so as to get apprentices to attend the classes as soon as they came into the trade. Regarding Firth College, he explained that the committee had tried on two occasions to come to an arrangement with the authorities, but had failed, owing, as he thought, to the fact that the college was not so well endowed as Owens College, and the authorities thought that pharmacy should be taught by pharmacists.

At this point Mr. Cross asked the President to put up the flag, and after a brief continuation of the discussion in committee business was resumed, the President winding up the discussion.

JANUARY EXAMINATION.

The Secretary read the report of the Preliminary and Edinburgh examinations. They showed the following results:—

Edinburgh Minor Examination.

55 candidates	26 passed	29 failed.
---------------	-------	-----------	------------

Preliminary.

309 candidates	163 passed	146 failed.
----------------	-------	------------	-------------

Thirteen certificates from other bodies accepted.

THE PHARMACY BILL RESUSCITATED.

The PRESIDENT submitted a draft Bill for the amendment of the Pharmacy Acts, which is as follows:—

A BILL

TO BE INTITLED

An Act to amend the Pharmacy Act, 1852, the Pharmacy Act, 1868, and the Pharmacy Act (1863) Amendment Act, 1869.

WHEREAS it is expedient to further secure that persons known as chemists and druggists should possess a competent practical knowledge of their business:

Be it therefore enacted by the Queen's most excellent

Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons in this present Parliament assembled, and by the authority of the same as follows:

1. The powers of "the Pharmacy Act, 1852," of "the Pharmacy Act, 1868," and of "the Pharmacy Act (1868) Amendment Act, 1869," with respect to examinations required for obtaining certificates of qualification under the said Acts, or either of them, shall be extended so as to allow of the division of the said examinations into preliminary and other parts of the same; also for periods of time and courses of instruction between any of the said parts; also that persons presenting themselves for the final part of an examination shall have deposited with the registrar under the said Acts certificates of their having duly attended courses of instruction in chemistry, botany, and materia medica, and having for not less than three years in the whole served in the open shops of chemists and druggists or in public hospitals or dispensaries as apprentices or pupils of chemists and druggists qualified in accordance with the law of the country in which they are carrying on business to dispense the prescriptions of persons legally qualified to practise medicine in that country.

2. It shall be lawful for the Pharmaceutical Society of Great Britain from time to time, by by-laws duly confirmed by the Privy Council, to regulate the said division of examinations and also the said periods of time and study between any of the said parts, also to allow and provide for and to regulate the reception of certificates issued by other examining bodies in lieu of or so as to satisfy the examiners in lieu of the preliminary part of any examination, also to regulate the courses of instruction in chemistry, botany, and materia medica to be duly attended as aforesaid, also the forms of certificates to be for any purpose of this Act deposited with the said registrar, and also the notices to be given and fees to be paid by persons intending to present themselves for examination in any part of an examination or desiring any registration under the said Acts or either of them. Provided always that no such by-law shall come into operation prior to January 1, 1893.

3. This Act shall not extend to Ireland.

4. This Act shall come into operation on the first day of January one thousand eight hundred and eighty-nine, and may be cited for all purposes as the Pharmacy Acts Amendment Act, 1883, and shall be construed as one with the Pharmacy Act, 1852, the Pharmacy Act, 1868, and the Pharmacy Act (1868) Amendment Act, 1869.

In moving that this draft be adopted the President said that the Bill was practically the same as that of last year, only one or two alterations had been made in order to meet the objections of certain members of the House of Commons. One of these objections was as regards apprenticeship in hospitals and dispensaries, which was now met by changing one clause so that a certificate of three years' pupillage with a chemist and druggist in any country would be accepted as proof of training in pharmacy. In consequence of this alteration the waiving clauses of the previous Bill, under which the committee could waive all conditions precedent to examination in exceptional cases became unnecessary, and the omission of the clause would satisfy an objection which had been made by the Parliamentary Bills Committee of the British Medical Association. The same committee had objected to training pharmaceutical students in *materia medica*, for fear that should lead to medical practice. It was a far-fetched objection, but it was now disposed of by stating in the Bill that this Act should be construed as one with the Pharmacy Acts of 1852, 1868, and 1869, according to which qualification did not entitle chemists and druggists or pharmaceutical chemists to practise medicine. He hoped that the Bill would meet with the support of the whole trade, and pointed out that it would not affect any except those who entered the trade *after* 1893. It was a Bill which would benefit candidates by enabling them to go through a course of easy education from the day that they entered the calling, and such education as would enable them to qualify at the end of the apprenticeship. Then it would fix a period of three years between the passing of the Preliminary examination and qualification—that would be a great gain. He was convinced that the immediate effect of the curriculum would

be that candidates would pass in larger numbers, and that the chemists and druggists of the future would be a better set of men.

Mr. HAMPSON said that he had at first opposed the curriculum, but after mature consideration he had come to the conclusion that he should support it. (Applause.) He gave the Bill his hearty benediction, and appealed to those who were formerly with him, to those who had influence, and the trade generally, to do all that they possibly could to get it made law.

The motion was then put, and carried unanimously, great satisfaction being evinced at Mr. Hampson's support.

The rest of the business consisted of the General Purposes Committee's report, but its nature was not made public.

JANUARY EXAMINATIONS.

A meeting of the Board of Examiners for Scotland was held at 36 York Place, Edinburgh, on January 24, 25, 26, and 27. The members present were Mr. Michael Carteighe, president, Messrs. Clark, Dott, Gibson, Gilmour, Kinninmont, Maben, Nesbit, and Stephenson. The principal business of the board was the examination of 56 Minor candidates, the following twenty-six of whom passed, and were declared qualified for registration as chemists and druggists, viz.:—

Baillie, Daniel, Motherwell	Henry, James, Edinburgh
Bannerman, James Murdoch, Edinburgh	Horne, John Kay, Accrington
Beadle, Thomas Alfred, Edinburgh	Laing, John W. A., Wigan
Bennett, George, Stockport	Maclaren, Duncan, Edinburgh
Bruce, James, Glasgow	Maillard, Ralph William, Newcastle-on-Tyne
Chaloner, Henry, Stockport	Poustie, James Henderson, Edinburgh
Clarkson, Joseph, Edinburgh	Rendell, John Marley, Edinburgh
Colman, William, Manchester	Sime, Thomas, Edinburgh
Cowie, George, Edinburgh	Sutherland, Alexander, Dunbar
Davidson, Joshua, Crosby, near Maryport	Taylor, Richard Noble, Barrow-in-Furness
Douglas, John, Edinburgh	Thirsk, Arthur Tom, Hull
Forbes, Walter, Belfast	Tollitt, William, Liverpool
Forsyth, William, Edinburgh	
Gellatly, Robert, Edinburgh	

Trade Notes.

MR. PEDRO STÜRUP, drug merchant, of Puerto-Cabello, Colombia, South America, has taken into partnership Mr. H. A. Hausen. The firm will be carried on in future under the style of Stürup & Hausen.

By an oversight in making up our pages last week we omitted the formula advertisement of Mr. T. Brooks, of Louth. Mr. Brooks, who knows the value of our circulation, is naturally much disappointed. We hope business resulting from his subsequent announcements will compensate him for what he lost by the omission.

A FIRST and final dividend "of .65 of a penny in the pound" has been announced by circular to the creditors of Hoge's Honey Company. Final dividends of small fractional amounts are not uncommon, says the *City Press*, but a first and final amount equal to only 2*l.* 14*s.* 2*d.* in a thousand pounds is a rarity.

WE have received from Messrs. Burroughs, Wellcome & Co. a sample of their tabloids of antipyrin. This new antipyretic appears to have secured a permanent place in therapeutics, a circumstance which is probably due to the fact that continued clinical experience has shown that it possesses properties which were not at first accorded to it. It is not only an anti-febrifuge, but it promises, as Dr. Germain Séé first pointed out, to rival morphine as a pain-reliever. Pharmaceutically antipyrin is a troublesome thing to work with. Owing to its comparative insolubility it must either be suspended in aqueous mixture, or dissolved in a larger proportion of alcohol than is generally agreeable. For these reasons the tabloids should prove an acceptable form for administration. Messrs. Burroughs, Wellcome & Co. have been appointed special agents for the manufacturers for the supply of antipyrin in this country.

Legal Reports.

DOCTORS' CHARGES.

IN the Queen's Bench Division of the High Court of Justice on January 26 and 27, before Mr. Justice Stephen and a special jury, the case of *Coumbe v. Hanson and Brodhurst* was tried. The first defendant was the Lord Mayor of London last year. The circumstances under which this action was brought were as follows:—In September, 1886, Colonel Brodhurst and others were in a carriage driven by Miss Hanson. Meeting a traction-engine the horses bolted, and the carriage was overturned. Colonel Brodhurst's thigh was broken, and he sustained other injuries. Dr. Coumbe was sent for, and the Colonel was carried to his house, put to bed, and his thigh put in splints. Later in the day Sir R. Hanson called and told Dr. Coumbe to do his best for his friend, and that he would hold himself liable for the expenses incurred. He also asked the doctor how long the Colonel was likely to be laid up, and what his charge would be. He replied that he could not give him an answer then. At the end of eight weeks Colonel Brodhurst was removed to Brighton, the doctor going down with him, for which he charged 21*l*. A fortnight later he went down again to change some bandages; for that visit he charged 15*l*. 15*s*. Shortly afterwards the plaintiff sent in his bill to Sir R. Hanson for 210*l*. Sir R. Hanson sent him a cheque for 100*l*., telling him that, while he wished to act liberally with him, he considered that amount would amply remunerate him. The plaintiff now sued for the balance—110*l*.

Dr. Coumbe, in his evidence, stated that Colonel Brodhurst was laid up for eight weeks in his house. His wife and a hospital nurse were there also. He charged 10*l*. a week for the apartments occupied and the board. For accompanying the Brodhursts to Brighton he charged 21*l*., and for his second visit to Brighton 15*l*. 15*s*. He charged 89*l*. for the medical attendance at his own house. He was cross-examined chiefly in regard to the visits, which it appeared were charged 10*s*. 6*d*. each, and there were sometimes several in the day. Professional evidence was given on both sides as to the general charges of doctors. The Judge, in summing up, said that the scale of fees recognised among doctors seemed to him to be far more complicated than the scale of costs in the High Court. The question as to the reasonableness of the charges was—first, as to the number of visits, and secondly, as to the charge of 10*s*. 6*d*. a visit. It was for the jury to consider also who was to pay for the Brighton visits, and whether the charges for them were reasonable.

The jury retired for an hour, and then found a verdict for the plaintiff for 55*l*. beyond the 100*l*. paid by Sir R. Hanson, and the 25*l*. paid into court by Colonel Brodhurst. The verdict was against the defendants jointly and severally.

His Lordship gave judgment for the plaintiff with costs.

At the Liverpool County Court on January 26, before Judge Thompson and a jury, Dr. James Leatham, a physician in practice in Rodney Street, sought to recover from Mr. William Dunbar, a butcher carrying on business in Great Homer Street, the sum of 22*l*. for medical and surgical attendance. The plaintiff's case was that in October last the defendant, who was suffering from rheumatic fever, and had been previously attended by another doctor, sought the aid of Dr. Leatham, a physician of high reputation. The defendant was informed by Dr. Leatham that his charge was 10*s*. 6*d*. for each attendance, and to this charge the defendant made no demur. In ten days the defendant was able to go out. But three days later the defendant was driving in a trap, and by some mishap got badly hurt. The doctor made a certificate for an accident insurance company; and for this and attendances upon defendant's wife and child the sum of 22*l*. in all was charged. Mr. Segar, for the defence, contended that the defendant knew nothing about the plaintiff's Rodney Street fame, that Dr. Leatham's aid was sought through his dispensary in Seacombe Street, and that defendant expected his charges would be at the low rates, namely 2*s*. 6*d*. a visit, and had accordingly paid into court 5*l*. 14*s*. 6*d*. in settlement of the claim. The jury held that Dr. Leatham was called in as a dispensary doctor, and gave a verdict for the sum paid into court, and awarded defendant his costs.

THE STRENGTH OF SAL VOLATILE.

ON January 27 at the Alfreton Petty Sessions, before Mr. G. Cressy Hall (chairman), Mr. C. R. Palmer-Morewood, and Colonel Peddar, Mr. James Gabbittas, chemist and druggist, of Swanwick and Stonebroom, was sued by Colonel Shortt, inspector of weights and measures, on a charge that his son "Did unlawfully sell to the prejudice of one Robert Tomlinson (the purchaser) 3 oz. of sal volatile, which was found to be deficient in alcohol and contained only one half of the amounts of ammonia and carbonate of ammonia prescribed by the British Pharmacopœia, and was not of the nature and substance demanded by the purchaser, contrary to the Food and Drugs Act."

Mr. J. G. Wilson, Alfreton, appeared for defendant, who pleaded not guilty.

Robert Tomlinson, assistant to Colonel Shortt, deposed that on November 25, 1887, he went to the defendant's branch establishment at Stonebroom. Thomas Gabbittas was in the shop, and he asked him for 3 oz. sal volatile, for which he paid 1*s*. Witness told him he had bought it to have it analysed, and then divided it into three parts, leaving one part with Mr. Gabbittas, taking one himself, and sending one to the analyst. Mr. Gabbittas told him he sold it as it was supplied to him.

Mr. Wilson: When you went into the shop what did you ask for?

Witness: Three ounces of sal volatile.

You in no wise defined what sal volatile you required?—I did not.

Colonel Shortt produced the certificate of Mr. Allen, of Sheffield, the public analyst, who was of opinion that the sample was different in quality to that of the B.P. "It was deficient," added Mr. Allen, "in alcohol, and contained only one-half of the amounts of ammonia and carbonate of ammonia which would be present in an article prepared according to the instructions of the B.P. Its medicinal value would be proportionately diminished."

Mr. Wilson: Is this the first prosecution you have had with regard to the article of sal volatile?

Colonel Shortt: It is.

Might I ask what reason you had to take this against Mr. Gabbittas?—No particular reason; I was informed that sal volatile was being sold improperly manufactured.

You had no reason specially for taking action against Mr. Gabbittas?—None at all.

Are you under the impression that druggists are obliged to sell their preparations according to the B.P.?—Unless at the time they sell the article they say it is not a B.P. preparation.

Is the chemist obliged to ask it, or the purchaser?—I never have.

The British Pharmacopœia is not mentioned in the Act of Parliament—is not that a fact?—I believe so.

That is so; and the Act shows that they are not bound to sell according to the B.P. But you were under that impression?—Yes.

The Chairman: What have you to rely upon? Why should you form that opinion when the Pharmacopœia is not mentioned in the Act?—It is not named.

Then why should you come to that opinion?—Because it is the highest authority.

The Chairman said undoubtedly it was an authority, but they could not compel people to go by it unless it was in the Act. First-rate doctors, perhaps, made their drugs up by the B.P., but how could they maintain that by the Act they were obliged to so make them. This was a very awkward thing. It would be better if some case were taken to a higher court, and some precedent given.

Mr. Wilson: The summons said, "prescribed by the B.P.," as if chemists were required to sell their preparations according to the B.P.

Colonel Shortt: That was a quotation from the analyst's statement.

The Chairman remarked there had been cases brought before that Bench where the articles had been so weak that danger had arisen through a person finding that they could take so much of the weak stuff, and then taking the same quantity of the stronger preparation, not knowing it. They could see what the result would be. He believed a case had occurred in that town where a person had been in the habit

of taking weak paregoric and then was supplied with the proper article, and took the same. They wanted something to act upon.

Colonel Shortt: There is no more evidence for the prosecution.

The Chairman: Are you not bringing some evidence to show how these things usually are compounded?

Colonel Shortt: I have none.

Mr. Wilson, in opening his defence, said the charge was a very serious one against his client, who had been in business forty years, and had never had a complaint made against him previously.

The Chairman pointed out that Colonel Shortt, in his duty as an inspector, simply took it as a test case. There was no vindictiveness in the prosecution.

Mr. Wilson said he did not blame Colonel Shortt. But this charge was a very serious one to make against any tradesman, because it was nothing less than saying he carried on his trade unlawfully. Young Mr. Gabbittas, who sold the sal volatile, had managed a branch business at Stonebroom for four years, and was just starting in life there. They had it from Colonel Shortt that he was under the impression the drug must have been of the strength prescribed by the B.P. In that point he wished to draw the attention of the Bench to the fact that it was not so required, and druggists were not obliged to sell of the strength prescribed by the B.P. There was no indication of such a thing in the Act, but there was evidence of a contrary intention. It was stated in the 24th edition of Stone that when the Bill was introduced it contained a clause providing that drugs should be compounded according to the B.P., but it was struck out in the House of Lords, showing that the House refused to sanction the stipulation that chemists should sell according to the B.P. The prosecution also must prove that his client acted in a manner prejudicial to the purchaser, and not to the particular officer who might be laying a trap to catch a person. There was no allegation, however, of that kind in this case. The Bench would be satisfied that Colonel Shortt had no reason to suppose that Mr. Gabbittas was selling anything to try and defraud the purchaser. Sal volatile was first introduced in the year 1721, and since then it had been sold under this name. It was prepared after two formulæ, either of which was an article of commerce. Sal volatile, of the London Pharmacopœia, was sold at nearly the same price as the B.P. preparation, but both preparations were known by the same name. The former was more frequently sold, the reason being that the flavour is preferred by the public, and the latter was used chiefly in medical preparations. The analyst said that the test for sal volatile was its weight, but the article tested was said to be deficient in ammonia. It so happened that ammonia was the cheapest of the ingredients.

The Chairman (to Colonel Shortt): Have you the specific gravity?

Colonel Shortt replied in the negative.

Mr. Wilson, continuing, remarked that the difference in the price of the two preparations was very little more than a half-penny in the pound. Therefore, the article was not prejudicial to the purchaser, and he should prove that it satisfied the demand. But he believed he had shown conclusively that chemists were not obliged to sell their drugs according to the strength of the B.P. He contended that if a purchaser wanted the B.P. strength he should have asked for it. Then, again, if people who were in the habit of taking the L.P. preparation were supplied with the B.P. article, and took it in the same quantity as the L.P., in all probability they would be made ill by it.

The Chairman: There is the mischief of it, and that is why we have supported Colonel Shortt in the action he had taken in the case of sweet nitre and paregoric.

Mr. Wilson said he would show that the L.P. preparation was ten times more used than the British. Therefore he held that if a person wanted the stronger preparation he should ask for it, and the sale was neither unlawful nor prejudicial to the purchaser. He hoped also that the bench would show in a marked manner that the defendant left that court without the slightest stain upon his character or trade, and he thought before Colonel Shortt entered upon these proceedings he should have been informed that druggists were not required to sell according to the British Pharmacopœia. He called

Mr. James Gabbittas, who said he had carried on business

as a chemist and druggist between forty and fifty years. There had never previously been the least question as to the quality of the drugs he sold. He traded with Messrs. Hirst, of Leeds. They were a very extensive firm, and he had been in the habit of sending orders for sal volatile to them, without stating whether he required the London or the British Pharmacopœia. They had been in the habit of supplying him with the L.P. Until this summons was served he never kept the B.P. preparation.

By the Chairman: The order left him simply to supply so much sal volatile.

By Mr. Wilson: He had never introduced any foreign substance into it whatever. Since he had kept the B.P. preparation he had only sold it once, and then it was returned, as it was stated that it tasted more like hartshorn, and was not what was wanted. He believed sal volatile as prescribed by the L.P. was introduced to the trade so long ago as 1721, but the B.P. was only introduced in 1835. What he sold was according to the L.P., and this would contain about half the quantity of ammonia that the B.P. would. He produced a number of circulars to the trade, and every one of these offered both mixtures for sale. Messrs. Howards & Sons, who were, perhaps, the largest manufacturers, put the L.P. preparation first. The difference in prices varied from 2d. to 4d. per lb.

Mr. James Fawthrop, traveller for Messrs. Hirst, Brook & Hirst, wholesale chemists, of Leeds, stated that their house had been established something like forty-five years. They carried on a very extensive business, and he had been traveller for them for thirty years. Their house manufactured sal volatile very largely. Messrs. Howards & Sons were generally considered to be the largest manufacturers of this in the trade, and in their trade circular they quoted the L.P. preparation first. The firm he represented continued to manufacture according to the two formulæ. The L.P. preparation being the earliest, if an order came for sal volatile they sent this. The synonym of sal volatile came in 1835. They sold from four to five times as much of the L.P. as they did of the B.P. The L.P. preparation was preferred because it had a pleasanter flavour, and he had heard from customers that when the B.P. had been supplied it had been objected to, and returned.

Mr. Wilson: The article you sold would stand the test of the London Pharmacopœia?—Yes, at the time it was sent out.

It could not be adulterated?—Not without detection.

And your firm guarantee what they sell?—Yes.

Mr. Wilson drew the attention of the bench to the fact that this was no mixture of Mr. Gabbittas'; and it was guaranteed by the firm that supplied it. It was sold as received (To witness) Sal volatile is liable to evaporation?—Yes.

The article sent out by you satisfied the demands of the purchaser?—Certainly.

What is the B.P. preparation chiefly used for?—In physicians' prescriptions, but they frequently supplied the L.P. to doctors.

By Colonel Shortt: Allowing for evaporation every time the bottle was taken down, the sal volatile would bear the test of the L.P.

The Chairman: How far is the analyst out of his way in saying that the sal volatile sold by defendant contained only half the amount of ammonia and carbonate of ammonia—is it your rule to send it out like that?—No, certainly not. It would not answer the B.P. strength.

We are asking you how it bears comparison?—I cannot tell you exactly, but the B.P. is nearly double the strength of the L.P.

The Chairman: According to that the analyst is not far wrong; that is what this evidence comes to.

By Mr. Wilson: The price of the two preparations was about the same; there was something like 2d. difference in the lb. Ammonia was one of the cheapest ingredients.

Colonel Shortt: I should like to ask what proof he has to show that the L.P. preparation is only half the strength of the B.P.?—The British Pharmacopœia will show that.

Mr. Wilson: If this is so it has not materially deteriorated since it was supplied to Mr. Gabbittas.

Mr. Spencer Robinson, chemist and druggist, of Alfreton, stated that he was a member of the Pharmaceutical Society, and had been in business twenty-five years. He traded in

sal volatile, and kept both the L.P. and the B.P. preparations. He had sold the former for many years. He sold four or five times more L.P. than B.P. If customers simply asked for sal volatile, and did not specify which they required, and they were strangers, he would inquire whether they meant the L.P. or the B.P. He sold both at 4*z*. an ounce. Those who had taken the L.P. for years did not like the B.P.

The Chairman: What is the usual dose for a weakly person, an adult, to take?

Witness: About half a teaspoonful of the London compound.

Now what would be the result if they took the same of the B.P.?—It might cause choking.

The Chairman: There is the mischief of these weak compounds. A person might be in the habit of taking a certain quantity of sal volatile prepared according to the L.P. formula; not knowing the difference, he might go to another place, and obtain sal volatile according to the B.P. preparation, with results not desirable. The same thing occurred with regard to those wretched paregoric preparations. There were kinds where opium was nearly absent, while in others it existed to the proper extent. Well, if a mother had been in the habit of giving her child paregoric of a certain kind, and she then went to another town and gave it a similar quantity obtained there, the chances were the result would be fatal. To witness: Don't you think it would be better if these were all sold according to one formula?—Yes, sir; but this is the fault of the law.

By Mr. Wilson: The L.P. preparation satisfied the demand.

By the Chairman: If a medical man sent a prescription he would expect the B.P. to be used in that case.

Mr. Henry Neale, chemist, of Greenhill Lane, said he had been a chemist and druggist forty-two years, and had been in the habit of supplying his customers with sal volatile. He kept both the L.P. and B.P. preparations, but if ordinary customers applied he would give them the L.P. preparation because it was invariably preferred.

By the Chairman: Unless the B.P. was asked for he supplied the other. He had sold hardly any of the B.P. He believed this was the custom throughout the trade.

By Mr. Wilson: He had many customers who had been in the habit of taking the L.P. preparation for years, and they do not care for the other.

The Chairman: If anyone who had been in the habit of taking a full dose of the L.P. were to take the same quantity of the other, what would be the result?

Witness: It would be injurious, and make the person excited. If a medical man sent a prescription I should feel bound to use the B.P. preparation.

The Chairman: This is a test case. The Act was passed so as to enable people to get something like pure food and pure drugs.

Mr. Wilson thought they might take it clearly that there was no offence under the Act. His client satisfied the purchaser with the nature, quality, and substance of the article demanded. Sal volatile was applied for, and the ordinary article was supplied.

This being the whole of the evidence,

The Chairman said the magistrates could not see their way clear to convict. It was a test case, but the evidence which had been adduced showed that the custom of the trade had been followed. They should very much like Col. Shortt to take the case to a higher court and see if a definite decision could not be arrived at as to the sale of these drugs. Speaking merely as an individual he should think that the British Pharmacopœia should be followed, but there was nothing before them to show that this had to be done. He again expressed the hope on behalf of the bench that an appeal would be made to a superior court. They did not mind about their decision being upset, so long as a definite arrangement was come to for the guidance of the trade and the public as well.

Mr. Wilson applied for costs on behalf of his client, but they were not granted.

THE PAIN-KILLER TRADE-MARK CASE.

We are informed that the plaintiffs in the Pain-killer case have given notice of appeal against Mr. Justice Kay's decision, which we reported last week.

THE ALLEGED FRAUDULENT SALE OF "BEECHAM'S PILLS." —AN IMPORTANT RULING.—ACQUITTAL OF PRISONER.

At the Liverpool sessions on Wednesday, before Mr. Leofric Temple, Q.C., deputy recorder, a middle-aged man, named Richard Beecham Pritchard, was indicted on six counts charging him with obtaining money by false pretences. Mr. Swift appeared for the prosecution, and the prisoner was undefended.

In opening the case Mr. Swift said the prosecution, which was by the police, was for selling to certain small shopkeepers cards containing boxes of pills, which were called "Beecham's Pills," and the retail price of which was 1*d*. a box. The prisoner had represented that the pills were "genuine Beecham's pills," and further, that he was authorised by Mr. Beecham to sell them, and again, that he had been in Beecham's employ.

The first evidence called was that of Hannah Moore, a widow, who kept a shop in Netherfield Road, Liverpool, and who deposed to the prisoner having called upon her about twelve months ago, and asked her to buy a card containing a dozen boxes of pills, the card being headed "Beecham's Pills, a penny per box." He said he was connected with Beecham. She bought the card, and on a subsequent occasion when he came again bought another card, paying 8*d*. per dozen boxes. She believed the prisoner to be from Beecham, of St. Helens, otherwise she would not have bought the pills.

In cross-examination by the prisoner, the witness said she did not remember that what he said was that two of the pills were equal to three of Beecham's, and she admitted he had offered to take them back if they did not sell well; they did sell well, however.

The Deputy Recorder: Did any of your customers die?—No, sir, they did not, they had them over again. (Laughter.)

The Prisoner: Did they satisfy your customers?—Yes, they had them again. They asked me if they were really Beecham's, and I said I was told they were.—Replying further to the prisoner, the witness said she had no thought of prosecuting him. She had been waited upon by Mr. Beecham's detective and another detective. No word as to St. Helens was mentioned by the prisoner or her when she bought the pills. She was not told she would be prosecuted herself if she did not appear to prosecute him.

Mary Ann Richards, who kept a grocer's shop in Rokeby Street, Liverpool, gave similar evidence as to the purchase. She remarked that the pills were larger than the Beecham's pills she knew, and the prisoner replied they were the very same, only Beecham was now making them larger. She then bought some. She would not have done so but for the representation that they were the real Beecham's pills. The prisoner said he had worked for Beecham before he got into such a large way.

To the Prisoner: When I remembered the pills were larger than Beecham's you did not reply that two of them were equal to three of Beecham's. I am certain you mentioned St. Helens.

To Mr. Swift: I would not have bought the pills if the prisoner had not told me they were Beecham's, of St. Helens.

The Deputy Recorder: Mr. Swift, you are going on the assumption that there is only one Beecham in the world. There is no registered trade-mark, and they are not patent pills.

Mr. Swift: Well, there is a well-known pill upon the market which has been advertised for forty years as Beecham's pill. For anybody else to sell other pills in the name of these pills must be a fraud upon the public.

The Deputy Recorder: I don't think so.

Mr. Swift: Well, it is for the jury.

The Deputy Recorder: Oh, yes, of course it is for the jury. I will hand them all up to the jury, and some water for them to take them with if you like. (Laughter.)

Mr. Swift: If you tell me a man like the prisoner has a right to go and make false pills and sell them as genuine ones I might as well stop.

The Deputy Recorder: But it does not appear that they are false pills. They have done everybody good, and they came again a second time.

Mr. Swift then called Mary Ann Breddy, a shopkeeper in Great Homer Street, Liverpool. Her evidence was to the same effect as that of the other witnesses. Replying to the

prisoner, she said he had never mentioned to her that they were the pills of Beecham, of St. Helens. No inducement was given to her to prosecute him. She was not prosecuting him, but attended as a witness. Her customers were quite satisfied with the pills.

The Prisoner: I sold you Beecham's pills, and my name is Beecham, and I think I am entitled to sell Beecham's pills as far as that is concerned.

Alfred Breddy, the husband of the last witness, said he came into the shop while the prisoner was there selling the pills. He said they were genuine Beecham's pills, and gave his name as Thomas Davies, and his address as 9 Sarah Street. This was in reply to witness's request, as witness thought if the pills sold well he should like to know where to go to get some more.

To the Prisoner: You did not tell me simply that that was an address where I might get more pills. You said it was your name and address.

The Prisoner: You expect your expenses to be paid?

Mr. Swift: He is a witness for the public prosecutor here. He is not in any other capacity.

The Deputy Recorder: Well, let the prisoner ask him. He may try to show the man has an object.

The Prisoner: That is what I mean.

Replying further to the prisoner, the witness said he expected his expenses to be paid by some one; he could not afford to attend the court for nothing. But he had never seen Mr. Beecham before he was at the police court, and that gentleman had not promised him any expenses.

Mr. Thomas Beecham was then examined by Mr. Swift. He said he was the proprietor of the medicine known as "Beecham's Pills," which were stamped and registered as a patent medicine. He had been in business at St. Helens making and selling the pills for between forty and fifty years. They were very popular all over the world. He had advertised them very largely for the last fifteen or twenty years. The pills sold by the prisoner were not of his make, nor were they like his own. The prisoner had never been in his employment.

To the Prisoner: No one could mistake the two pills; they were not alike. Are you a chemist?—I am not here to answer questions of that sort. Did you not sell pills in the St. Helens market place?—I am not going to answer that.

The Deputy Recorder said such questions had nothing to do with the issue.

Mr. Beecham then left the box, the Deputy Recorder remarking as he did so, "Mr. Beecham, I hope you will thrive by your pills." (Laughter.)

Mr. Beecham: I hope your Honour will try them some day, too.

Mr. Swift: I am sure they will do no harm.

The Deputy Recorder: I should want a presentation box.

Mr. Swift: Well, I dare say Mr. Beecham has one.

The Deputy Recorder: Oh, no; I never take pills (Laughter).

Mr. Edward Davies, public analyst for Liverpool, was next examined, and he spoke to having analysed the pills sold by the prisoner, as well as the genuine Beecham's pills. The composition was not identical.

The Deputy Recorder: There is nothing to poison you in one or the other?

Witness: They are both purgative—the ordinary purgative pills. They have got aloes in them.

The Deputy Recorder: They would not do harm?

Witness: Well, I think any pills would do harm if you took too many of them. I don't think it is beneficial to health to take them at all.

The witness was cross-examined by the prisoner as to the composition of the alleged fraudulent pills, but nothing of importance was elicited.

Alfred Lamothe, a detective officer in the Liverpool force, spoke to arresting the prisoner on a warrant at Walton Workhouse. He said, "I will plead not guilty. What I have got to say I will say to Mr. Raffles." Witness had inquired in Sarah Street, and found no one residing there of the name of Davies, nor was there a house numbered nine.

The Deputy Recorder: Mr. Beecham, you have not found the sale of your genuine Beecham's pills fall off since this?

Mr. Beecham: It still keeps increasing.

Then you are not injured?—I don't know that we are not injured to some extent. I can't say as to that.

Mr. Swift said that was his case.

The Deputy Recorder (to the jury): Gentlemen, what do you think of it? I know what I think. There is nobody injured at all. These pills have sold well, and Mr. Beecham is generous enough to say he has not suffered, but that his sale is increasing.

Mr. Swift: A direction like that seems very much opposed to the principle of the Acts of Parliament relating to mercantile marks.

The Deputy Recorder: Oh, nonsense.

Mr. Swift: Certainly.

The Deputy Recorder: Not a bit of it. I won't say what I think of the case until the jury have decided; but I know what I will say then. Do you wish it to go on, gentlemen? That is what I ask you.

The foreman here intimated that the jury thought there was no cause for the case to proceed. They thought there had not been a sale by fraud. There was really no criminality on the part of the prisoner.

The Deputy Recorder: I think so. I think it is about the most absurd prosecution I ever heard. That will be a verdict of "not guilty."

The prisoner was then discharged.

BANKRUPTCY REPORTS.

Re F. P. DENNAN, Bow Lane Common and elsewhere, Physician.

MR. H. BROUGHAM presided at the first meeting of creditors under this failure last week. The debtor, who is described as formerly of Edinburgh and Glasgow, has filed accounts showing gross debts of 1,071*l.* 0*s.* 7*d.*, of which 1,133*l.* 4*s.* 3*d.* is unsecured, and assets 17*l.* 16*s.* 4*d.* Mr. Mason applied for the petitioning creditor, whose proof was for 779*l.* 16*s.* 2*d.*, principally for money lent. There was no offer, and the case being a summary one the Official Receiver will wind it up in bankruptcy.

Re THOMAS IRVEN MCCARTHY, Manchester, Oil Merchant.

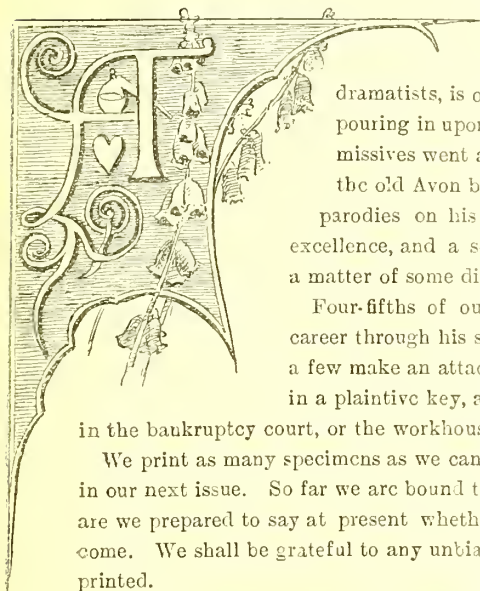
A MEETING of the creditors of this debtor was held at Manchester on January 26. The bankrupt's statement showed liabilities amounting to 5,404*l.* 6*s.* 1*d.*, and assets 477*l.* 6*s.* 8*d.* The Official Receiver, in his report, said the bankrupt was in the employment of his father, an oil merchant at Leeds, up to 1863, when he went to Manchester and sold oil on commission for another firm; but the agency never paid expenses, and in 1870 he made a composition with his creditors of 5*s.* in the pound. In 1876 he made a second composition of 12*s.* 6*d.* in the pound, and in 1879 he became bankrupt. After acting as agent for several oil firms, he started business in 1883 on his own account, but the business was a failure, and his father and brother, who had each guaranteed 500*l.*, had to pay the guarantee. He afterwards acted as agent, and in 1887 began business again on his own account. No dividend was paid in his bankruptcy in 1879, as the assets realised next to nothing. It was said that there was some probability of the bankrupt's friends assisting him to make an offer. No resolution was passed by the meeting.

Re DAVID MARR, 254 High Holborn, Surgical Instrument Maker.

THE receiving order in this case was made on December 9. The debtor has been adjudged bankrupt, and an order has been made for the summary administration of his estate. The accounts filed showed total liabilities 695*l.* 19*s.* 1*d.*, of which 607*l.* 0*s.* 5*d.* is expected to rank, against assets of 147*l.* 11*s.* 2*d.* According to the Official Receiver, the debtor states that he commenced business in 1877 with about 50*l.* He attributes his failure to his expenses having been in excess of his profits during the last three years, owing chiefly to heavy rental and to expenses attendant on the long illness of his wife. The debtor has, by consent, been adjudged bankrupt.

POST-CARD COMPETITIONS, 1888.—No. 1.

SHAKESPEAREAN PHARMACY.



ALL the world's a stage, and all pharmacists are born Shakespearean dramatists, is our conclusion as the post-cards in reply to our late announcement come pouring in upon us. And a closer examination of the manuscript on these halfpenny missives went a good way to prove that the modern swans would have made it warm for the old Avon bird if he had rashly ventured into the pharmaceutical competition. The parodies on his original essay on the universal stage and its players were of unusual excellence, and a selection from the crowd—which we find ourselves compelled to make—is a matter of some difficulty, and the award of the laurel wreath a task of no little delicacy.

Four-fifths of our contributors take the very obvious line of tracing the chemist's own career through his seven most prominent stages. Some select their customers for satire, and a few make an attack on the medicines they supply. By far the majority deal with the topic in a plaintive key, and the monotony of the opening, "First the Apprentice," and the wind-up

in the bankruptcy court, or the workhouse, is somewhat noticeable.

We print as many specimens as we can find space for this week, without comment, and hope to repeat the dose in our next issue. So far we are bound to say that we have not made any comparison of the parodies sent in, nor are we prepared to say at present whether the best is among those which now appear or among those yet to come. We shall be grateful to any unbiased reader who will send us, on a post-card, his selection of the best here printed.

All the world's a stage,
The weary druggist toils amid its players:
"Short exits" his, inglorious entrances;
With solemn mien he plays his well-worn part,
When reached through seven stages. At first
the schoolboy,
Gnashing his teeth o'er Latin dry and tough.
And then the apprentice, chafing 'gainst his
bondage
And smashing all things smashable that come
Within his radius. Then the festive student
Digging in town! and daily sauntering forth
More *colleg*: to encounter! Then the junior,
Full of his new acquired dignity,
Jealous in knowledge, sudden and quick in a
squabble,
Seeking in vain a fair emolument
Even in the bottle's mouth. And then the
senior,
Of more contentment now, for better *service'd*,
With look anstere, and sapient consciousness,
Full of wise laws and wondrous instances;
And so he plays his part. The sixth stage shifts
Into the all-important manager,
With faultless mien, and just sufficient *side*,
His youth forgotten, buried in the past,
Virtue triumphant! Hear his manly voice
Issue commands to mild subordinates
Whose turn has yet to come. Last scene of all,
That ends this uneventful history,
Discovers him in business—and oblivion,
Sans joy, sans peace, sans *hair*, sans everything!

C. FRED R. PARS, Thrapston.

THE CHEMIST'S SEVEN STAGES.

From "Do You Like It?" (It isn't *likely* you will.)

In this worldly age,
There are some luckless ones who need our
prayers:
We need but look around for instances:
Here's one who as a chemist plays his part,
Moving by seven stages. First the embryo,
Who makes explosions, and the bense alarms.
And then th' apprentice, with his message-
basket
And oft times dirty face; sweeping, like snail,
Unwillingly the floor. And then the junior,

Glorious in hair-oil, cuffs, and stand-up collar,
Waiting on Mrs. Highbrow. Then, a senior,
Thinking of aldehydes while melting lard,
Combining science with the coal-tar barrel,
Seeking the bubble reputation
With blow-pipe in his mouth. And then the
boss,

In fair good business, with his purse well lined,
Until the stores step in and start to cut
(Of this, alas! we've modern instances);
And so he breaks his heart. The next stage sees
The sadden'd, weary, woe-begone old coon,
With sorrow-sharpened nose and winked hide,
The bottles on his shelves a world too big
For his shrunk stock; and his big, roaring
trade

Dwindling away to nothing, goes to pigs
And whistles with a bound. Last scene of all,
That ends this strange eventful history.
He in the workhouse seeks oblivion.

Sans pestle, mortar, books—sans everything.

ALEXANDER WHITELAW,
Peebles, N.B.

All the world's a shop,
And all the men and women purchasers:
They have their ailments real and fanciful;
And chemists in their time see many sorts,
Of patients old and junior. First the infant,
Whining for powders in the nurse's arms.
And then the wretched schoolboy, with his face
Distort by apple tart too freely munched.
And then the lover, with his sweetheart faint,
Comes in for sal volatile, et cetera.
A soldier next appears; quinine and earrie pulv.
Are placed at his disposal; he departs.
A well-fed alderman steps in; some seltzogenes
And other banquet adjuncts he requires,
Is soon supplied, and hastening away
Gives place to one whose hair fast turning white,
Infeebled footsteps, and bronchitis cough
From which he seeks relief, portend the approach
Of the great leveller. Yet one scene more.
Supported by a stick in either hand,
And slowly tottering within the chemist's door,
His friend and customer of thirty years,
To ask "how business is" and chatter o'er
The experiences of seventy years ago.

W. FREEMAN, 109 Icknield Street,
Birmingham.

"This pharmacy's a sham!"

So says the ambitious seeker after pelf
Who has sought a royal road to attain his goal,
Judged that he'd found it in the sale of drugs,
And then been disenchanted! At first as tyro,
Longing for blazes, bangs, and noisome stinks,
But set to develop the muscle by the radi-
ments,
To put up seidlitz powders, salts, and castor oil
Whilst cramming Cæsar, grammar, and arith-
metic,
To pass the blest Prelim! And then as appren-
tice,
Qualified in arts, who scorned the drudgery of
the chemist's shop,
And sought for freedom from the primal bottle-
washing curse.
Then student, full of strange words almost
meaningless to him,
Yet taking credit much for skill in chemistry
And other subjects wondrous, mysteries of
which he must unfold
Before the snave examiners. And then as Minor
man,
Thinking not meanly of himself as an expert in
science;
A graduate, indeed, in knowledge of the sweet
B.P.,
With all its synonyms, its doses, and its tests,
Evoking monthful imprecations! The sixth
stage saw him
'Stablished in a desert of shop-rounds and glazed
mahogany,
Awaiting customers who would not come
To purchase nostrums, patents, or commodities
too varied
To be named in this brief space; neither to
test his skill
In the dispensing art, preferring rather the
cheap cutting stores
Which savoured not of paints and oils. Last
scene of all,
Ending this strange eventful history,
In sorry plight he seeks aid from the fund
benevolent,
Sans cash, sans shop, sans health, sans every-
thing.

G. A. GRIERSON, Sheffield.

My pharmacy's a stage,
And all my customers are real actors,
When through my open doors they make their
entrances,
I, patient waiter, see daily many acts,
And here are seven. An infant, cross and
pceevish,
Its nurse imploring soothing medicine.
And then a yelling schoolboy, with aching tooth
And swollen face, dragged like a calf
To the shop-dentist. And then a booby,
Smiling like morn, seeks perfume sweet
For his "young woman." Then a soldier
(Half-pay, of course) struts in to know
Why decent men do charge more than the
stores;
Ignores my patient waiting and his long
Unpaid account. And then an alderman—
Bloated, dyspeptic, and yet hungry ever—
Asks for his dinner pill; so, with blind eyes,
He draws a bill on nature. The sixth act brings
A lean and haggard man: his mouth
With respirator armed; his shrinking purse
Still open to the advertiser's lies
Ancient cure. His quav'ring voice,
With almost childish innocence, asks for
The latest crum. Comes after these
A contrast in this queer but truthful history,
A dame of ninety years—bale, fresh as spring—
Sans potion, pill; sans drug, sans anything!

BIEDER.

THE MODEL CHEMIST.

A chemist's life I sing,
And its experience, long and varied.
It has its pleasures and its trials,
For one man in his time acts many parts,
His life having seven eras. At first the *ap-
prentice*,
Foundling and wrapping in a muddling style.
And then the young *inquirer*, with slight know-
ledge
Of mixing mixtures, rolling out his pills,
And shirking work. And then the *assistant*,
Racking his brain, with a woful grimace
Made at his Pharmacopœia. Then at *college*,
Full of new thoughts and botanised ideas;
Zealous for honours, studying hard for Minor,
Seeking that needed appellation,
Even in the Bloomsbury Square. And then the
Major,
With greater honour, M.P.S. degree,
Making him fit a pharmacist to be,
And thus to play his part. The *sixth term* shifts
Into the bright, well-filled establishment,
Where lives the chemist, happy in his toil.
His youth's hard work repaid, the world the
better
For his living, with his broad ideas,
Enlarging science ever, easing pain,
And helping all mankind. *Last scene* of all
That ends this bright and cheerful history,
Is blessing-crowned old age, and heart's content,
With health and wealth, with strength, with
everything.

PHILEAS.

THE YOUNG DRUGGIST'S SOLILOQUY.

The town lies around me,
And all the men and women shall be customers.
They have their little whims and foibles,
And I must meet them. Let my drugs be good,
Chosen with due regard to quality,
And prised in reference to place and circum-
stances,
To give my conscience ease. This sure must
satisfy,
When every article doth recommend itself,
And nought be bad or dear. Then myself
Must be obliging, earnest, quick to please,
And, jealous of my honour's reputation,
Shall give to each his due. Thinking no evil
If that my customer doth seem too keen,
Or would deprive me of my own just right.
With a soft discourse will I try to prove
That my experience and business skill

To choose the good is to the present gain
Of him who buys from me. And this same skill
Should have its value, though perhaps but small.
So pass the years. The public confidence
I shall obtain, and honest industry
Meet with its just reward. As the sands of life
Run their allotted course, I fain would hope
(Serving all others as I would be served)
To find contentment and a life of peace.
And when the final silver cord is loosed,
I travel onward, through the great unknown,
May love, respect, esteem still hear me com-
pany!

GALLUS BANCIVIA.

Pharmacy's the rage,
And all the men and women patronise it.
They have their mixtures and their liniments;
And one man in his time takes many pills—
During his seven ages. At first the infant
Taking dill-water in the nurse's lap.
And then the naughty schoolboy—overfed,
With pale and haggard face—taking his rhubarb,
Shuddering the while. And then the lover,
Wanting a tonic with a something in it
To soothe his heart-strings. Then the policeman,
Of taking oaths and roughs from out Hyde
Park,
Courting rheumatics in Trafalgar Square,
Patiently earning his promotion,
Even at the rabble's mouth. And then his
worship,
With good sound head, with common-sense well
lined,
Dispensing justice, taking phosphorus pills
To fortify his brain, so that he may
With credit play his part. The sixth scene
shifts
Into the voluble and grand old man,
Who chatters away, and will keep on
Airing his eloquence, until his silvery voice
Requies a gargle, that his bronchial tubes
May be again made strong. Last age of all,
"And why one e'er attains it is a mystery,"
Is one when it is just as well to do
Sans mixture, lotion, pill, sans everything.

H. HERBERT.

The world's one vast Pharmacopœia,
And its countless remedies cure many ills
That our poor flesh is heir to. Our skilled
chemists
Have wrought these remedies to great per-
fection,
Made for each age of man a fitting medicine.
(We thank them courteously.) No more the
infant
Wails with inflamed gums; by aid of "Steel-
man's powders"
Its teeth it bravely cuts, and thrives apace on
"Ridge's Food."
The schoolboy swallows "Carter's Little Liver
Pills"
With ease—for him no more the nauseous
draught
Or clumsy pill. The enraptured lover pens
A sonnet to his mistress's wondrous hair, grown
By "Lasson's Hair Elixir." And then the
soldier,
"Jealous in honour, sudden and quick in
quarrel,"
Fears nor heat, nor cold—with "Cockle's Pills"
he wards
Off all disease. The justice with "Hop Bitters"
Stimulates his jaded appetite, and gloating
O'er the turtle soup, he does it double justice;
And digestion aids by use of "Rooke's Elixir,"
Lives to a green old age with memory clear,
Sound teeth, sound sense—by using "Jacob's
Oil," sound limbs.

Mrs. W. D. SCITON, 1 High Street, Margate.

All my friends are chemists,
And all the men among them merely drugges;
They have assistants and apprentices,
And each one in his time makes many blunders,

Until he gets the sack. At first the apprentice,
Poking in every corner of the shop,
And then the industrious student, with his
blowpipe
And well-worn Attfield, ereeping at 9.30
Round to the college. And then before the
examiner,
Feeling quite funky, with woful physiognomy,
Makes up his pills and medicine. Then he's a
chemist
Full of justifiable pride; or if he chance to fail,
Jealous of those who pass, ready to pick a quarrel
With the examiner that plucked him,
Even though he well deserved it. And then the
qualified assistant
Gets forty pounds a year to keep himself re-
spectable,
Shuts up at ten, and works all day on Sunday;
Has experience metropolitan, with good address,
And he sells pen'orths of pills. The sixth age
shifts
Into the lean and hungry man in business,
With spectacles and hosts of other things to sell
That stores don't get sufficient profit on
To pay a dividend, and his big drug invoice
Turning his brain because it's treble
What it ought to be. Last snaw of all
That breaks this piteous chemist's back
Is premature decay brought on by overwork,
False teeth, glass eyes, false hair, false every
thing.

JOHN WILSON, Birmingham General Dispensary.

If all the world's a stage,
Methinks most pharmacists are mere farce-
players,
They have such crotchets and such phantasies;
And one man in his time plays many parts,
His acts being seven stages. At first the school-
boy
Grinding at Cæsar and the Latin grammar.
And then the smug apprentice in his apron,
Hauling the pestle with a grace befitting
A trade he thinks "genteel." And then the
junior,
Seeking engagements, with a gorgeous toilet
Made snrely to secure 'em. Then a student
Full of strange terms and bleary-eyed as an owl,
Zealous at "college," sudden and quick in
"erammering,"
Pricked like a bladder by examination
Even when he is not "ploughed." And then
the chemist,
Thin, care-worn, yellow, troubled oft with wind;
With mien sedate and hesitating tongue,
He hems and ha's, and puffs his remedies,
And so he plays his part. The sixth stage shifts
Into the square yecept of Bloomsbury;
With head of stately pose, and heaps of "side,"
In 's Sunday clothes, well shaved, he struts with
pride
In his new rank; and oft with reereant voice,
Turning against the trade by which he thrives,
Votes the curriculum. Last scene of all,
That ends this pharmaceutical history,
Is close on bankruptcy and mere oblivion,
Sans trade, sans "tin," sans "tick," sans every-
thing.

YR MELANCHOLY JAKUES.

All pharmacy's a trade,
And all the scientific men but traders.
They have their profits and their losses,
And one man in his time makes several starts,
Turns o'er clean pages. At first the 'prentice,
Ponnding and grinding at his master's drugs.
Then the ill-paid assistant, much-snubbed man,
With pale and haggard face, rolling out pills,
And reading for exam.; and then the student
Quaking like ague, with an awful horror,
Sits on the flogging form. Then a "Major,"
Full of ideas, and ready with his pen,
Anxious for knowledge, patient and deft
finger,
Making laborious researches
In spite of low exchequer. Then the pharmacist

In newly-painted shop, with bottles lined,
With manners suave and coat of decent cut,
Full of small talk, remarks upon the weather,
And "tis the last thing out." In vain his shifts.
In poorer street we see him settled soon,
With creditors at door, and debtors fled,
His youthful knowledge gained, a world too wide
For his poor trade; and his great earnest brain
Laying aside its young ambitions, fails
In making both ends meet. And last of all
He lives—but how remains a mystery—
In utter poverty and mere oblivion,
No friends, no fame, no hope, no—anything.
FRED REYNOLDS, Wharfe Cottage, Shaw Lane,
Headingley, Leeds.

All the world's a store,
And all the men and women physic-takers.
They have their favourite drugs and medicines,
And one man in his time takes many things
To cure his numerous ills. At first the infant
"Soothing Drops" or "Mother's
Friend";
And then the sulky urchin, sore averse
To drink the nauseous draught of Epsom salts
His mother has prepared; and then the lover,
Jilted and spurned, sits brooding o'er his grief
With laudanum by his side; and then the soldier,
Full of sharp cuts and half-healed bullet wounds,
Seeks for relief from keen rheumatic twinge
In Holloway's Ointment and St. Jacob's Oil,
Or hartshorn well rubbed in; then the gourmand,
Fond of old wine and highly seasoned meats,
Would swallow half the Pharmacopœia
To cure his raging gout. The next age shifts
Into the valetudinarian,
His youthful dreams that physic will cure all
The ills that flesh is heir to being dispelled
By sad experience and declining years.
And his most grateful voice, that used to laud
Some advertised elixir to the skies,
Now praises it no more. Last scene of all,
That ends this disillusioned history,
Is fear and doubt, or mere indifference,
Sans faith, sans hope, sans everything.

JAMES GRIME, Darwen.

Drysaltery's the rage!
For pharmacists and chemists are but *mirers*,
They have their exams, and their entrance fees,
And each one in his time with money parts
To fatten Bloomsbury's sages. At first th' apprentice,
Dusting and mixing in his master's store,
And then the hopeful student with his books
Of wondrous learning, hoping soon to shine
At Bloomsbury's school. And then the candidate
Sighing like furnace, with a woful fear,
Fluck'd at first attempt—and now rejected,
Full of strange oaths, becalls examiners;
But jealous of his honour seeks once more
The bubble reputation, the vaunted M.P.S.,
Even at Bloomsbury Square. At last triumphant,
Examination passed, high honours won,
His task is at an end. The next stage shifts
Into the well-stocked and emblazoned shop,
Where, with forced smiles and look of self-esteem,
He awaits his share of customers. But finds,
Forsooth,
They love cheap stores the best—attainments high
Fall wholly to allure them. Last scene of all,
That ends this strange eventful history,
Is ruin, bankruptcy, and mere oblivion,
Sans shop, sans home, sans friends, sans everything.
ICHABOD.

In this busy age,
Scores who strive as chemists are not stayers:
They have their trials and their grievances,
The exams, and competition press them hard—

The worst being cutting prices. First the apprentice,
Dusting and polishing his master's goods;
Then the youthful student with his "Muter,"
Grinding knowledge apace behind the counter
On a three-legged stool. Then when examined,
Fumbling, and forgetting all he knows, fails
In the trying ordeal. Then, a grumbler;
Hot with rage, and full of dark forebodings;
Eager still for fame—resolved to be a chemist,
Seeks again the qualification
At the examiner's hand. And now the Minor,
Replete with knowledge, and with science crammed,

With beard elate at length the Major wins,
And fully fledged a business purchases,
And thus he makes his start. The sixth stage quick
Reveals the sham, and shows him, ah, low soon!
The vanity, alas! of all his toil:
His hard-earn'd gains, slow piled, from low-priced sales,
Have quickly shrunk, and the bright joyous hopes
Regarding future competence and wealth
Are empty as the wind. Last stage of all
Is wrapped in dense judicial mystery—
'Tis early bankruptcy and forced seclusion:
Sans trade, sans cash, sans friends, sans everything.

W. R. CHANTLER, Newport Pagnell.

The pharmacy's our stage
And we who're styled "Bill Garlicks" are the players.
Each in his time, from dull apprenticeship
To worrying years of ill-paid thought and work,
Acts many parts. Some ill—some with more grace.
First the raw youth fresh come from Dr. Brown's
Armed with preceptor's note to pass "Prelim."
Poking his nose in every drawer and pot,
Coming strange names with wonder mixed with awe.
Next head apprentice, now possessed of skill
To mix an unguent smooth and free from grit;
With nose upturned at work unscientific,
Dusting unwillingly the bottles, pots, and shelves.
The Minor's quicksands passed, perceive him low,
The ardent lover of investigation; and he writes
Essays abstruse and spectroscopic notes.
He "burrows" now with a gregarious horde,
And shares the winds at their "welcome" board.
Now Major gained he plants with warlike mien
His coloured signs; seeks fortune and repute
Even at the mortar's mouth. Now made examiner
He frowns severe upon the ill-informed.
Next spectacles on nose and bent with care,
Grown loose in ways yet still import unt air,
Behold him now, frail shadow of himself.
Last scene of all displays our worthy knight,
Working against overwhelling influences,
Hedged in by doctors who dispensing do;
Cut to a fraction by the numerous stores;
Hampered by laws which bury hope's bright blooms;
Sans health, sans wealth, sans rest, sans everything.

A. H. HETHERINGTON, Plymouth.

There is a minor stage,
On which the pharmacutists are the players.
Each meets with many strange experiences,
In this odd medley of science, trade, and arts,
His course being seven stages. At first the 'prentice,
Lured like a moth by pharmacy's outward charms,
And then the rising "junior" with indentures
Seeking his first place, spending spare hours
At the Bloomsbury School. And then the Minor,

The great testing furnace, through which all must pass,
The all-absorbing question being how? Then the Major,
Which many loathe, but coveted by the herd,
Who seek the honour, privileges, and title,
Which gives but, after all, a doubtful reputation
If reports do speak the truth. And then the master,
In fair, sound, steady trade with credit lined,
With tone severe, sharp tact, and formal strut,
Laying down the laws to his apprentices;
And so he plays his part. The sixth stage, and
The stores appear upon the scene,
With old and modern prices side by side,
To which the public go to be supplied.
The chemist, for high prices, with his big, manly voice,
Turning again to childish treble, pipes,
But whistles to the wind. Then comes the fall
That ends at last in undeserved misery,
In the parish workhouse (what worse oblivion?),
Sans hope, sans money, sans reputation—everything.

A. OLDFIELD, 1 High Street, Margate.

All the world's a shop.
We are buyers or are sellers in it,
And from his entrance to his exit
A C. and D. must needs have many parts,
Attained in seven stages. First the infant,
Taking soothing-syrup from his nurse's hands;
Then as a schoolboy, with his hopeful face;
And many ups and downs in his attempts
To pass the dread Prelim. Then as apprentice,
With an awful mess of pill-mass in a fit,
Made to his master's formula. Then as student
Full of ardent hope, and working long and hard,
Jealous lest he fail, and quick to comprehend,
Seeking for his future reputation
Even in the test-tube's mouth. Then as assistant
In a high-class shop, with gilded fixtures lined,
With tones severe and beard of tawny hue,
Full of himself and of his M.P.S.—
And so he plays his part. And then as master,
Taking his ease, and slipped until noon,
And his well-tuned, persuasive voice responds
To childish treble, burly men, and mincing maid,
And treats them all alike. Last scene of all,
That ends my tale of this snug pharmacy—
His name, his business pass to his successor,
And he himself enjoys a well-earned rest.

SODA CARB.

All the world's a race,
And all the chemists in it rank outsiders.
They have their chances but are handicapped,
And should one man perchance to make good start,
His obstacles are seven. At first the *grocer*,
He that does *crow, sir!* 'bout "low price for cash";
And then the oilman and his patents,
With terebinthate smell, hissing his motto,
"*Oil cut or die.*" And then the quack,
Who showeth by aid of sublimate, the *yellow phlegm*,
Thus giving men the "*blues*." Then the stores,
—*Pre-cursor* of all evils—a *cursor* thou hast been
To all us chemists. And then the co. op.
(The country one), with numbers having purse well lined,
Who patents out and drugs sell at their cost,
Swing for a time, then come to fearful smash.
And so they play their part. The sixth one shifts
Into the draper, lean with good address,
Who, discontented with fair Nature's wants,
Doth wish to *perfume* her as well as *drap* her.
Last one of all,
The herbalist—who *senna* drinks compounds,
Which *senna* send men into mere oblivion,
Sans health, sans wealth, sans sense, sans everything.

T. O. KENT, Walmer.

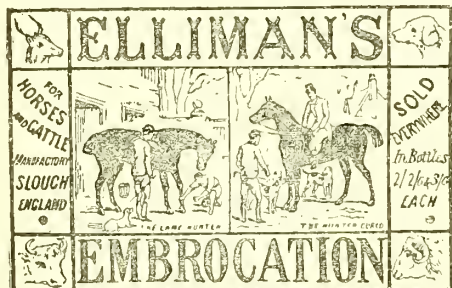
"Securus judicat orbis terrarum."

Apollinaris

"THE QUEEN OF TABLE WATERS."

The filling at the Apollinaris Spring during the year 1887 amounted to
11,894,000 Bottles.

SHOW CARDS, 24×17 or 17×12,



Free to any Address.

SILICATED CARBON FILTERS

AERATED

PATENT MOVABLE BLOCK.

SEE ADVERTISEMENT, PAGE 33

Woodhall Spa.

STRONGEST BROMO-IODINE MINERAL WATER

Especially recommended by the Medical Profession

For RHEUMATISM, GOUT, and SCIATICA, Chronic Skin Diseases, Scrofula, Rickets, and some Diseases peculiar to Women.

The Woodhall Bromo-Iodine Water is now being bottled at the Spring and can be obtained from any Chemist, or on application direct to the Spa, Woodhall, Lincoln.

Woodhall Spa.

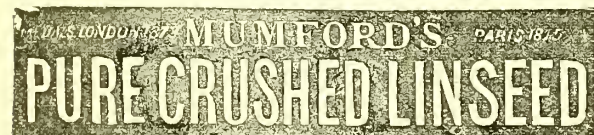
DR. RICHTER'S PAIN EXPELLER

1/1½ and 2/9, is regularly stocked by the Wholesale Houses.

USUAL TRADE TERMS.

DEPOT FOR THE UNITED KINGDOM:

DR. RICHTER & CO, 1 Railway Place, Fenchurch St., London, E.C.



17/- per cwt., bag included, 18/- in 28 and 56 lb., 20/- in 7 and 14 lb. parcels 1 lb. tins, 5/- per doz. Best Quality. No Oil Extracted. Carefully Cleaned and Ground, so as to retain the natural colour of the seed without being heated. G. S. MUMFORD, FARRINGTON ROAD, LONDON.

A. W. Carter & Co. Estd 1831
Soluble Essences for Mineral Waters
Old Refinery Bristol

EDITORIAL NOTES.

THE PHARMACOPŒIA AND THE SALE OF FOOD AND DRUGS ACT.

THE case tried at Alfreton last week, and which we report in full, is a curious complement to the cases tried at Sheffield in reference to tincture of opium and paregoric a year ago, the former of which was subsequently disposed of in the Court of Queen's Bench in May of last year. In the case then settled, it will be remembered, the question raised was whether, when tincture of opium is asked for in a shop, it is an offence against the Sale of Food and Drugs Act to supply an article of less or other than Pharmacopœia strength. In the particular instance which was the basis of the action, the article supplied when tincture of opium was asked for was found to be one-third of the morphia strength and one-half of the alcoholic strength of tincture of opium of the British Pharmacopœia. The Sheffield magistrate refused to convict, on the ground that unless the B.P. article was specifically asked for the vendor was not bound to supply it. On appeal to the Court of Queen's Bench, however, Lord Chief Justice Coleridge and Mr. Justice Smith reluctantly decided that the magistrate was wrong, and they reversed his decision; but they made it clear that they so ruled, not on the ground that the Pharmacopœia was an official standard, but because the evidence before them went to show that when tincture of opium was asked for the tincture of opium of the British Pharmacopœia was the article invariably intended and usually supplied. The evidence in the sal volatile case which we report this week was all the other way; and if the Alfreton magistrates had had before them Lord Coleridge's judgment in the tincture of opium case they would have been bound, we think, to have decided as they did. No one can question the common sense of their decision, and with Lord Coleridge's judgment in view it seems to us that the law of the matter is sufficiently well defined without the necessity of the appeal which the Alfreton bench, with such a magnanimous disregard of the defendant's pocket, so urgently recommended. The Sale of Food and Drugs Act nowhere declares the Pharmacopœia to be the official standard of purity. On the contrary, as shown by the defendant's advocate in the sal volatile case, a proposal that this should be adopted was deliberately rejected. The question is to be decided in each case on the merits. If it can be shown that in the ordinary course of retail business the article asked for is almost invariably understood to be the Pharmacopœia preparation, that evidence is conclusive, but if the reverse can be proved, as was done in regard to sal volatile, the opposite conclusion ought to be no less doubtful.

"Sal volatile" is a synonym which crept into the last edition of the British Pharmacopœia; it did not exist in the previous editions, nor in that exact form in any of the pharmacopœias of the colleges. "Sal volatile," properly speaking, is carbonate of ammonia, and the aromatic spirit of ammonia has been recognised by text-books and druggists' labels as "spirit of sal volatile." Latterly, however, custom has sanctioned the shorter expression, "sal volatile," as the synonym for the spirit. Still, it is important to recognise the fact that this is a misapplication of the term, and that the London Pharmacopœia in the first instance termed the spirit "*Spiritus salis volatilis oleosus*." Until 1839 the Pharmacopœia of the Dublin, Edinburgh, and London colleges agreed fairly in ordering a spirit containing only carbonate of ammonia. At that date the Edinburgh Pharmacopœia replaced the carbonate with caustic ammonia; the Dublin authorities followed suit in this respect in 1850, and when the first British Pharmacopœia was published a spirit made from the carbonate of ammonia and caustic ammonia was authorised. Formulæ as well as names changed from time to time for a period of over a century, but the fact that the name, "*Spiritus ammoniæ compositus*," of the London Pharmacopœia, 1788, still exists on the labels of wholesale druggists indicates that practice, in one respect at least, has undergone little change. It was pointed out at the trial that the old London Pharmacopœia preparation is still preferred by many, and it becomes interesting to inquire what this preparation may be, for the mode of manufacture has varied from time to time. It will be convenient to consider only the London preparation in this respect. The 1721 spirit was distilled from carbonate of potash and sal ammoniac; the 1746 spirit from caustic potash and sal ammoniac. This method remained the same chemically, but differing as to details of the operation, until 1824, when the 1721 method was reverted to, and was continued with alterations as to quantities until superseded by the British Pharmacopœia. As to the composition of these spirits, Dr. Thresh showed at the Pharmaceutical Conference of 1880 that a commercial sample of the 1787 spt. ammon. co. contained 0.678 per cent. of free ammonia and 0.657 per cent. of normal carbonate of ammonia, whereas the 1837 preparation contained 1.335 per cent. of the former and 1.805 per cent. of the latter. Samples of "sal volatile" and "spt. of sal volatile" contained from 0.142 to 1.371 per cent. of free ammonia and 0.383 to 3.982 per cent. of carbonate. Obviously, therefore, there was and is no uniformity in the composition of the old preparations, and Dr. Thresh found the same state of things regarding the B.P. spirit. The variation was traced to the method of preparation; it is difficult to distil carbonate of ammonia effectively at all seasons, and for that reason Dr. Thresh proposed the method which is now official, and which is calculated to yield a spirit containing 1.25 per cent. of free ammonia and 3.53 per cent. of the carbonate, as compared with the averages 1.33 per cent. free and 1.83 per cent. carbonate by the 1867 process. The strength adopted is high compared with what was obtainable generally by the old process, and rather favours the retention of the old P.L. spirits. In another respect the present spirit differs from the later London spirit, and that is in the flavour. From 1836 nutmeg was omitted from the formula, cloves, cinnamon, and lemon only being adopted as the flavouring adjuncts, but the nutmeg was retained in the Dublin form, and was taken up again in the British Pharmacopœia. Objection to the nutmeg flavour is still advanced as a reason for the sale of the London spirit, and for this and various other reasons a large section of the public still prefers the old spirit of sal volatile rather than the much more powerful spirit of the British Pharmacopœia.

DOCTORS' FEES.

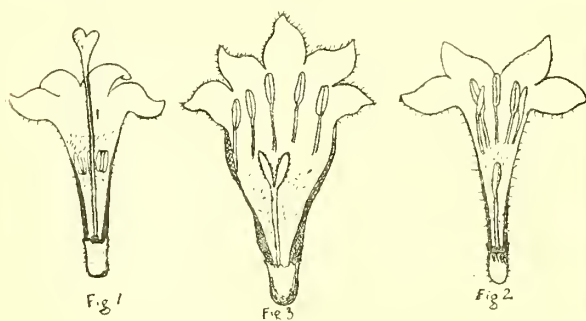
PROFESSIONAL charges are a source of endless vexation, or rather litigation, in the law courts. Lawyers would, no doubt, be much more severe on doctors generally if it were not that they live in houses of such very thin glass themselves. As is well known, there is very little love lost between the two professions; but a little experience of both will suffice to satisfy the victim that if the doctors' charges are whips, those of the lawyers can be likened only to scorpions. The doctors are sometimes extortionate; the lawyers are so invariably. The two or three cases which we have published recently, and this week, when doctors' charges have been brought under legal scrutiny, do not add anything to our knowledge of the law. They merely further illustrate the well-known fact that the most modest of men cannot always be quite accurate in their assessments of their own services. In a case at the Bromsgrove County Court, which we reported on January 21, the judge, Sir Richard Harrington, announced the heroic intention of not allowing in his court the charges of doctors for bottles of medicines beyond their commercial value, on the ground that an apothecary may now charge for his attendance. This is a step in the right direction. Apothecaries have a right to be fairly paid for their general care of a case, and they will no doubt get as much out of one system of charging as out of another; but for all that the public may be grateful to any judge who will insist on their making out their accounts in a way which enables the patient to check them. The case of *Coumbe v. Hanson*, reported this week, only goes to show that, in the view of a jury, a lord mayor is as liable to over-estimate his own generosity as a doctor may be to overcharge. Dr. Coumbe, it appeared from the verdict, had claimed 30% too much in a bill he had drawn up, but the ex-Lord Mayor was found to have paid him 80% too little when he sent him a cheque for 100%, telling him he wished to act liberally with him. The case at Liverpool is an amusing illustration of the varying value of a doctor's services in different parts of the same town. Medical visits of Dr. Leatham, of Rodney Street, appear to be worth 10s. 6d. each; but visits of the same Dr. Leatham, of Seacombe Street, seem to be worth only 2s. 6d. each. This case, however, is from some points of view to the credit of the medical profession. It is a fact which ought not to be forgotten that doctors do give priceless services to multitudes of the poor at rates which no business calculation can show to be profitable to them. The majority of those on the medical register are men who have invested from 300% to 500% in the acquirement of their special skill, and who employ that skill in arduous toil in the service of clients who only occasionally appreciate it, and for a net income which cannot compare with those often realised after far less preparation in business pursuits; and while the man of business is creating a property which he can leave behind him, the doctor's income stops suddenly the day when his life, his vigour, or his capacity ceases.

MOOT POINTS REGARDING IPECACUANHA.

AT Bloomsbury Square in November last, Mr. Thistleton Dyer, Director of the Royal Gardens, Kew, in the course of some interesting remarks regarding the cultivation of ipecacuanha in India, said that the superintendent of the Darjeeling cinchona plantations had observed that plants which had been sent out from this country as apparently the same, had certain tangible differences, by which to the trained eye of the cultivator they could be distinguished, and they could always tell which were the Edinburgh strain and which were

the Kew strain. Mr. Holmes added that he believed that *ipecacuanha* is a dimorphic plant, and possibly either a long-styled or short-styled variety might have succeeded where the other would not.

This is a point to which little attention has been paid, although it has been known for many years, especially in regard to the fact that the *ipecacuanha* of commerce is found in three varieties, viz., grey, red, and black. We exclude the Carthagena variety, which is obtained from a different plant, *Cephaelis acuminata*. In his remarks Mr. Dyer spoke of the distinction between the Kew plants and those obtained from Edinburgh, but he did not mention the fact that the Edinburgh ones differed among themselves. If the truth must be told, Mr. Dyer's statement was rather a one-sided one. He had an excellent opportunity of paying a tribute to the indefatigable energy and perseverance of the late Dr. J. H. Balfour, through which much of the success which attended the introduction of *ipecacuanha* in India is due; but, instead of giving credit to the real worker, Mr. Dyer contented himself with a reference to Sir Robert Christison, who, though he interested himself in the *ipecacuanha* enterprise, did very little personally to promote it. Dr. Balfour was the first to observe the difference in the *ipecacuanha* plants cultivated in the Edinburgh Botanic Gardens. The plant has been cultivated in these gardens for upwards of fifty years, the first specimen having been obtained from Sir Wm. Hooker, then director of the Glasgow Botanic Gardens. This strain originally came from a Mr. Makoy, of Liège, and it flowered at Glasgow in 1843. In 1869 Mr. McNab, the curator of the Edinburgh Gardens, and his assistant, Mr. Lindsay, now curator there, discovered that cuttings of the root produced young plants freely, and from these the first consignment of a dozen plants from Edinburgh was sent out to India in 1871. As the supply of plants in the gardens did not appear to be adequate for the Indian demand, Dr. Gunning, of Palmeiras, near Rio Janeiro, was written to, and he sent home a supply of living plants. Distinct differences between these plants and the old Hookerian stock were observable, and the differences became more marked when the plant flowered. The flower of the Hookerian plant, first figured by Sir William Hooker himself in the *Botanical Magazine*, tab. 4,063, has a short pistil and five long stamens, as seen in fig. 3; but the



Rio Janeiro plants were found to be dimorphic, the flowers having the characteristics shown in figs. 1 and 2, viz., one resembling the Hookerian plant, and the other with a long pistil and short stamens. The leaves are also different; in the older plants they are firmer in texture, somewhat coriaceous, elliptical or oval in form, and with a blunt apex and wavy margin. The Rio Janeiro plants have thinner and more delicate leaves, which are elliptico-lanceolate in form, and have a pointed apex and less wavy margin. These differences are less marked as the plants grow older, but the Rio plant remains less shrubby and does not grow so freely. When Dr. Anderson, of Calcutta, came home in 1869 for *ipecacuanha* plants, in

addition to asking specimens from the Edinburgh and Kew Gardens, he commissioned the firm of Messrs. Lawson & Son, nurserymen, of Edinburgh, to procure plants from the Continent, and they succeeded in obtaining two plants from Messrs. Louis van Houtte, in Belgium. These were propagated by root-cuttings, and young plants were sent out to India. They also differed from the Hookerian and Rio Janeiro plants in that they had larger and smoother leaves. All three varieties are now in cultivation in the Edinburgh Gardens. The figures which illustrate this note are taken from "Remarks on the *Ipecacuan Plant*," which the late Dr. J. H. Balfour made to the Edinburgh Royal Society in 1872. At that time, and since, no connection was observed between the morphological differences of the plants and the different characters of the roots, but it is to be hoped that some attention will be paid to the matter. That might be done at Nilambur or other of the Indian plantations where *ipecacuanha* is under cultivation. The only thing to prevent this is such a condition of things as Mr. Dyer indicated in his remarks, viz., that the Kew plants have thrived and the Edinburgh ones have died out. This seems almost incredible, however, because three varieties were sent out from Edinburgh, one of which at least must have resembled the Kew one. Moreover, the first plant sent out from Kew in 1866 had not been very successful, for Dr. King, of Calcutta, reported at the beginning of 1872 (not 1868 as stated by Mr. Dyer) that "the only surviving offspring of the Kew plant amounted to five plants in Sikkim and seven in the Calcutta Gardens." At that time (1871-2) fully 300 plants were sent out from Edinburgh, and quite a small number from Kew. By 1873 these had been so carefully cultivated in India that the offspring could be numbered by thousands. It is rather paradoxical, therefore, to imagine that this enormous increase was solely due to the Kew plants which fared so badly before the Edinburgh ones came into competition with them. Such progress is too human for products of the vegetable world.

In connection with this subject reference may be made to the parcel of so-called Indian *ipecacuanha* which was disposed of at the drug sales last week. The root occurs in pieces about an inch long and fully an eighth of an inch in diameter. Its colour externally is greyish-brown; internally it is paler, but some pieces have a darker central portion, but the absence of the distinctive cortical and fibrous structure which characterises *ipecacuanha* shows that it is not that drug. There is some doubt about the botanical origin of the drug. We have submitted it to the authorities at Kew, but Prof. Oliver, Sir Joseph Hooker, Mr. J. R. Jackson, and others there who are well acquainted with Indian *materia medica* fail to recognise it. That the root has no therapeutic relation to *ipecacuanha* is proved by the fact, which we have determined, that it does not contain emetine or any other alkaloid. It is very starchy, and when chewed leaves an acrid, rather disagreeable feeling in the fauces, which might lead to emesis. In some respects, particularly its starchy nature, the root has a resemblance to *Atees* (*Aconitum heterophyllum* root) in the young state; but, whatever it may be, it is at present exciting considerable attention, and many wait its determination with interest.

THE LIABILITY OF BROKERS.

In our market report last week we referred to the sale by auction of four bales of a root alleged to be *ipecacuanha*; and we also mentioned that, so far as it was possible to determine by a superficial examination of the root, the article was not what it purported to be. Not only did a subsequent examination (the result of which is given in previous note) reveal the entire absence of emetine, the active

principle of ipecacuanha root, but several prominent pharmacognosists and botanists have failed to recognise the root, which certainly would not have been the case if it had been true ipecacuanha. It may therefore be taken as certain that the root in question is not ipecacuanha. Indeed, it differs from that drug in every respect, except that of a remote outward similarity, and, is so far as we know, quite worthless. Under these circumstances the question arises whether—and, if in the affirmative, from whom—the purchasers of the article would be able to recover the money they paid for it. In the drug catalogue of the brokers who sold the root on January 26 we find offered “22 packages ipecacuanha.” Eleven of these were imported per *Buffon* and seven per *Merlin*, and the genuine character of the root composing these shipments was not disputed. The “22 packages” were completed by four bales per *Coromandel*, forming the parcel under notice. Now we find, upon reference, that the steamer *Coromandel* was entered at the port of London on January 6, bringing, according to the bill of entry, no ipecacuanha at all, but having on board four bags “medicine roots,” consigned to Messrs. J. P. Alpe & Co. Whether these four bags are the parcel offered in the drug sales on January 26 as “ipecacuanha” a reference to the number of the manifest would show. So much is certain, that in the brokers’ catalogue the goods were referred to as “ipecacuanha.” Three bags were sold to one buyer, and the remaining one to another firm; but we understand that after the auction the buyer who had secured the single bale also purchased the three others. This brings us to the interesting questions whether the ultimate buyer, if it were proved to him that the article he had purchased was *not* ipecacuanha, would have a remedy against the person from whom he bought the three bales, and whether the latter in his turn could obtain redress by proceeding against the broker in whose catalogue the goods were classified as “ipecacuanha.” The problem would fall under the thorny category of contracts affected by trade custom. Such an issue would be of considerable interest, although that interest would be of a personal, or at least of a limited, character. But another point quite distinct from this one ought to be raised in the public interest, and that is whether the brokers who catalogued this article as ipecacuanha are not equally liable to penalties under the Sale of Food and Drugs Act, as the unfortunate retailer would certainly be if he should subsequently sell a few drachms of the root under the same inaccurate title. We may add that at the public sale the alleged ipecacuanha realised about one-third of what would then have been the value of selected genuine root.

The Pharmacetical Society. At the meeting of the Council of this Society on Wednesday two matters of general interest were discussed—viz., the numerical strength of the Society and the coming Pharmacy Acts Amendment Bill. When the year closed, the total strength of the Society was 5,691, as compared with 5,804 in the previous year; and of the number at least 2,027 have not yet got into business—we say at least, for there are probably a hundred or two of the pharmaceutical chemist members who are still assistants. The fighting strength of the Society may be put down as 3,500 men who are acquainted with the responsibilities of business. It was natural that the decrease in the number of veterans should have alarmed the councillors. For many years past the numbers have steadily declined. During the past five years 233 members have been lost to the Society, and only 163 associates in business have taken their place. A balance is struck, it is true, by associates not in business and apprentices, who between them make up the difference of 163; but these are merely the cadet corps of the pharmaceutical host, and figures show that they are unable to fill the gaps in the ranks of the real army. By that must their value be judged, for other-

wise they are a pecuniary loss to the Society. We are not a little surprised that some of the members comforted themselves in the belief that the youth of pharmacy is with them. Figures show quite the opposite. In 1883, the first year of the quintennium, the number of associates in business elected was 45.8 p.c. of those who became qualified; in 1884 the percentage was 34.7; in 1885, 32.1; in 1886, 30; and last year 19.7 p.c. That is without taking into account deaths, secessions, &c., or the increase in associates not in business. Allowing for these, we find that the recruiting of the Society's strength during the period was equivalent to 24.5 p.c. of the number of those who qualified in 1883, 19.2 p.c. in 1884, 22.8 p.c. in 1885, 8.0 p.c. in 1886, and less than none last year. To put the matter more plainly, during the five years 1886 persons have qualified as chemists and druggists; yet the increase of associates in business meanwhile has only been 236. To keep pace with the diminishing membership-roll the Society would require almost every man who passes the minor examination to join it.

“Talking Shop.” The Chancellor of the Exchequer, in his address to students as Lord Rector of Aberdeen University, has raised “talking shop” to a high dignity. What does this mean? he asks. What is “talking shop”? It means talking of the interests of the work which you do, or the profession to which you belong. “I know men,” Mr. Goschen says, “to whom the very idea of ‘talking shop’ appears something odious and vulgar. I can think of professions which scout the idea of shop being talked out of business hours. But injustice lies in the word and a snare in the thought. Too often it means the exclusion from lively conversation and pleasant discussion of that which forms the dearest intellectual interest of a man's life. Fashion has much to say in determining what men may talk shop, and to whom the privilege is inexorably denied. Be on your guard against this fashionable criticism. Many men are never so interesting as when they talk shop. The privilege is accorded in the fullest manner to the votaries of pleasure, of sport, of games; let it not be denied in some degree to higher intellectual interests.” And in the course of his address Mr. Goschen urges with striking force that, if this nation is to hold her own in the keen commercial rivalry of the world which is now so evident, the temper of mind indicated by “talking shop” is what must be cultivated more and more. “The man who, however instructed, mentally swears at the work to which he is condemned, who regards it as drudgery to be done from necessity or from a sense of duty, but to be got over as soon as possible and forgotten, is at a disadvantage in competing with the man to whom that work is constantly suggesting topics of interest, and to whom it is therefore not a drudgery, but a pleasure.” There is a lesson in this for workers in every trade and in every capacity.

French Pharmaceutical Journalism. It has occurred to some of the smarter members of the Pharmaceutical Society of Paris that if the London CHEMIST AND DRUGGIST can publish reports of their proceedings in the same week as their meetings are held, their own official organ, published in a neighbouring street, might manage to do as much in something less than six weeks. The experiment is to be tried. Reports of the meetings are in future to be got ready to appear in the *Journal de Pharmacie* of some ten days later. This dash and vigour will not give time for authors to make corrections in that issue, and these are to be published a fortnight later. It is hoped, however, that in consideration of the rush pharmaciens will pardon a few inaccuracies.

Embelia Ribes. We have received from Mr. Lascelles Scott a paper giving an introductory account of a chemical examination which he has made of the seeds of *Embelia ribes*, or Babarang, as it is called in Bengal. The drug has long enjoyed a high reputation in India as an anthelmintic—especially against tapeworm—and it has recently been suggested that the seed should be tried for the same purpose here. The seeds resemble small peppercorns, but are darker, in this respect more resembling pimento. Little taste is developed when the seeds are

chewed, but after a time a slight astringency and faint aroma are perceptible. In spite of these apparently negative characters Mr. Scott subjected the drug to analysis and found in it—(1) a minute quantity of volatile oil with "spicy" flavour; (2) fixed oil; (3) colouring matters; (4) a resinoid body; (5) a glucosidal principal crystallising in brilliant yellow scales like iodoform or plumbic iodide. It is insoluble in water, more soluble in chloroform and amyl alcohol, and most of all in pure acetone. Mr. Scott proposes the name *Embelin* for this body. (6) An alkaloid (perhaps two), which is of a white or yellowish colour, is nitrogenised, and is called Christebine, after Mr. Thomas Christy. (7) A kind of tannin (embetannic acid); and (8) some acid or acids. Mr. Scott is continuing his investigation.



AND

Literary Notes.

The Manufacture of Aërated Beverages, Cordials, &c. By W. Stevenson, F.C.S., and R. Howell, F.C.S. London, 1888. Pp. 62. Price 2s. 6d.

THIS is a book written for manufacturers, and is, in consequence, of a purely practical nature. The first half of it is devoted to descriptions of the origin, uses, and methods of preserving and storing various raw materials and compounds used in this important and ever-growing industry. Following this are seventeen pages of recipes for beverages of various kinds, and the rest of the book is taken up with pithy and useful articles on fermentation, filtration, fining, and tests for adulteration and impurities. Taken as a whole, especially in regard to the technical articles, this book will be found very serviceable to the manufacturer, there being few difficulties of the trade which are not accounted for, while many wrinkles are explained.

The Art of Ticket-writing.—This is another sixty-two page book. It is published at the office of the *Warehousemen and Drapers' Trade Journal*, Aldersgate Street, E.C. It is intended for the soft goods trade, but that is no reason why those chemists who appreciate the advantages of ticketing should not read it, the art principles being the same in both cases. Very full particulars are given regarding the materials and tools required in ticket-writing and stencil-making, and we have seen few better shillingworths of literature of this kind for a long time.

The Playground of Science. London: Truelove & Shirley, 7 St. Paul's Churchyard. 1s.

AN excellent collection of experiments illustrating the leading facts in physics, such as equilibrium, refraction, heat, weight of air, sound, and electricity. The experiments are striking ones, and are very cleverly illustrated. The book, while it makes no pretence, does, in a singular degree, attain the object often sought after of combining amusement with instruction.

NEW COMPANIES.

"CLAMOND" INCANDESCENT GASLIGHT COMPANY (LIMITED).—Capital, 200,000*l.* in shares of 1*l.* each. The company is formed for the purpose of acquiring the patents and patent rights granted to M. Clamond for the United Kingdom, and to manufacture and sell the incandescent gas-burners of the said M. Clamond.

SYKES, MACVAY (MACHINE-MADE) BOTTLE COMPANY (LIMITED).—Capital, 200,000*l.* in 5*l.* shares. This company has been formed for the purpose of acquiring Ashley's patent, and also certain rights and improvements under provisional specifications, for the manufacture of glass bottles, &c., by machinery. The company also take over the business and

works of Sykes, Macvay, and the Codd Bottle Company (Limited), glass manufacturers, Castleford, Yorkshire.

THE SUSSEX MINERAL-WATER COMPANY (LIMITED).—Capital, 5,000*l.*, in 2*l.* shares. Object—To carry on the business of the company to supply aërated and other waters, lemonade, ginger-beer, and other non-alcoholic beverages; and to purchase the business of mineral and aërated-water manufacturers now carried on by George Harrison, under the style and name of Ridge & Burroughs, at Black Lion Street, Brighton; by James Tourle, at Henry Street, Brighton; by W. W. Savage, under the style and name of the Goldstone Mineral-waters Company, at High Street, Brighton. The first subscribers are:—W. D. Savage, Brighton; J. Tourle, Brighton; H. H. Stubbs, Brighton; G. Davies, Brighton; A. Buckwell, Brighton; W. Shrivell, Brighton; and W. W. Savage, Brighton. The number of directors shall not be more than five nor less than three. The following are to be the first:—R. N. Inman, F. W. Warmington, W. Davenport, W. D. Savage, and J. J. G. Saunders. The remuneration of the directors will be 100*l.* per annum, to be paid out of profits only, and should a dividend of 6 per cent. be declared in one year an additional 10*l.*, and a like sum in addition for every 1 per cent. paid to the shareholders.

WEAVER HALL BRINE, SALT, AND CHEMICAL COMPANY (LIMITED).—Capital, 150,000*l.*, in 5*l.* shares. Objects—To purchase rights and interest in the present Weaver Hall Brine and Salt Company, together with an area of land covering some 90 acres, and to erect works for the manufacture of salt and of soda therefrom by the ammonia process.

Gazette.

PARTNERSHIPS DISSOLVED.

BRAMELD & HEPWORTH, Kingston-upon-Hull, cordial manufacturers.

BYTHWAY, J. T. & H., Manchester, merchants and drysalers.

CANDLISH, R., & SON, Seaham Harbour and Rotherhithe, bottle manufacturers and merchants.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDER.

CONDY, GEORGE, Knox Road, Clapham Junction, and Cologne Road, New Wandsworth.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

McKOWN, WILLIAM AUGUSTUS, Fairfield, near Liverpool; Liverpool; and Douglas, Isle of Man, assistant to wholesale druggists' sundrymen and wine-bar keeper, late chemist and druggist. Feb. 7, Official Receiver's offices, Liverpool. Feb. 6, Court House, Liverpool.

The following amended notice is substituted for that published in the *London Gazette* of January 24:—

HILTON, WILLIAM, Whitefield, near Manchester, chemist and druggist. Feb. 8, 16 Wood Street, Bolton. Feb. 6, County Court, Bolton.

NOTICE OF DIVIDEND.

HENZELL, WILLIAM J., Newcastle-upon-Tyne, importer and exporter of foreign produce, and general commission agent. First and final div. of 1½*d.*, Feb. 6, Messrs. Gillespie Brothers & Co., Cross House Chambers, Newcastle-upon-Tyne.

ORDER MADE ON APPLICATION FOR DISCHARGE.

PEEL, HENRY CLARKE, Dewsbury, chemist and druggist. Discharge suspended for forty days.

ONE of the visitors at the late Chemists' Ball has called our attention to the omission of any mention in our report of the invaluable services rendered, not on this occasion only, but for many years past, by Mr. T. C. W. Martin as M.C. Mr. Martin, we are told, is as necessary as the music, and far more important than the chairman. Mr. Martin may be pleased to know that our indignant correspondent is a lady.

LABORATORY NOTES.

Communicated to the Midland Counties Chemists' Association.

By R. A. Cripps.

DETECTION OF STRYCHNINE FOR TOXICOLOGICAL PURPOSES.

[Abstract.]

IN toxicological research strychnine is generally detected by the process devised by Girdwood and Rogers, which has various objectionable features about it. The author, by a modification of Stas's process, has succeeded in separating the alkaloid much more quickly. He digests the solid substance in six times its weight of methylated spirit, containing a little tartaric acid. This is done for several hours at a temperature a little below the boiling-point of the spirit. The liquid is then filtered, evaporated, and the residue dissolved in 1 oz. of water, and 20 minims of spirit added. The solution, containing suspended matter, is then repeatedly shaken with a mixture of equal parts of chloroform and ether, until all colouring-matter is washed out. The chloroform washings are rejected, the aqueous fluid is rendered alkaline with ammonia, and again shaken with chloroform-ether to dissolve out the alkaloid, which again is re-extracted with acidulated water, the solution rendered alkaline with ammonia, and the strychnine finally dissolved out with chloroform-ether. The method can also be used quantitatively with very satisfactory results, if the ethereal and other liquids be washed by a second or even a third treatment with the solvent employed. To test its accuracy 0.9 grain of strychnine was introduced into a dead cat, and the stomach, &c., treated as described; 0.85 grain of pale yellowish well-defined crystals was obtained.

INORGANIC MATTER IN EUONYMIN.

As far as I know there are no published results of the amount of ash in euonymin. I was led to examine it on account of the known adulteration of an allied substance, podophyllin, and was much surprised to find in every instance a large proportion of phosphate of calcium, the smallest amount of ash being 13.5 per cent. in two samples only, one of which was the brown variety, the other the green. In these two cases nearly the whole of the ash was phosphate of calcium. The amount of ash in the other samples varied from 29.3 per cent. to 53 per cent., in every instance except "No. 1" consisting largely of sulphate of sodium, in addition to phosphate of calcium. Sample "No. 8A" is the same as "No. 8" after washing with cold water to remove the sulphate of sodium; this treatment, however, removed in addition a considerable amount of organic matter, leaving only 5.6 per cent. of the original weight insoluble. The actual percentages of ash obtained were:—

No.	Ash per cent.	No.	Ash per cent.
1	29.3	8	42.0
2	42.0	8A	43.0
3	13.5	9	50.0
4	13.5	10	42.0
5	49.0	11	52.0
6	49.7	12	53.0
7	47.0	13	43.0

I desire to thank Messrs. Southall Brothers & Barclay, to whom I am indebted for permitting these experiments to be carried out in their laboratory.

SAND IN KAMALA.

Some three years ago I published, in conjunction with Mr. P. W. Squire, a note showing how largely kamala is adulterated with sand. During the last year I have again had occasion to examine a few samples, the results of which tend to show that this adulteration is still carried on as largely as before. The figures are as follows:—39.0 per cent., 49.4 per cent., 33.5 per cent., 16.2 per cent., 39.7 per cent., and 9.8 per cent. Only one of these is within the limit of 10 per cent. allowed by the Pharmacopœia. I think it is high time that all respectable druggists refused to stock such articles as this unless they answer the requirements of the Pharmacopœia. Their systematic examination would entail

very little loss of time, and could be conducted sufficiently accurately for practical purposes with ordinary dispensing scales, porcelain crucible or dish, Bunsen burner, and a tripod-stand.

PURITY OF THE B.P. SALTS OF BISMUTH.

Mr. George Lloyd, in his note to the Midland Chemists' Association, reports as follows on commercial samples of the above:—

Carbonate of Bismuth.—Seven examined. One contained a trace of chloride, and four, traces of lead. Two free from all impurities.

Citrate of Bismuth.—Five samples examined, one of which was pure. One contained a trace of chloride and lead; another, a trace of nitrate; and two, traces of nitrate and lead.

Citrate of Bismuth and Ammonia.—Six samples examined, two being pure. Lead was found in three (one of these also contained iron, and another chloride). The sixth specimen contained chloride.

Oxide of Bismuth.—Of six samples examined, one was pure. Another contained traces of lead and iron; a third, lead; a fourth, chloride; and the remainder, iron. All in traces.

It will thus be seen that lead was found in fourteen out of thirty-three samples, and is probably derived from the metal used. The iron in all likelihood comes from the solution of soda used in making the salts in which this impurity was found. It is noticeable that neither arsenic, copper, nor silver was found in the samples, but the author said nothing of selenium and tellurium.

ASBESTOS.

At the meeting of the London Chemists' Assistants' Association held on Thursday evening, Mr. Frank A. Rogers discoursed on this subject. His paper was an interesting one, dealing with the origin and general uses of asbestos. It occurs in three forms—(1) fibrous; (2) floss; and (3) powder. The first variety is found chiefly in the Valtellina and the valley of Aosta, in the former 5,500 feet above the level of the sea. It is embedded in serpentine rock, from which it is mined by blasting with dynamite. The rock of the tableland of Acqua Nera, 6,500 feet above the sea-level, is also rich in fibrous asbestos; and in the valley of Aosta it is also found, in much similar positions to that in the Valtellina. The material obtained from these Italian sources is a silicate of lime and magnesia, with about 2½ per cent. of alumina, 3 per cent. of oxide of iron, and smaller percentages of potash and soda. Floss and powder asbestos are also obtained from Italy, as well as two other varieties—viz., mountain cork, consisting of fibres less flexible than fibrous and floss asbestos, and of a brown or dirty white colour. This variety swims on water. Mountain leather, a similar variety, occurs in sheets. Canadian asbestos is much inferior to the Italian, being brittle and of short fibre. It is obtained from the Province of Quebec exclusively. It differs materially in chemical composition from Italian asbestos, there being almost double the percentages of alumina and oxide of iron, and only traces of potash. Recently asbestos has been brought from Cape Colony, but it is of a very inferior character, and contains 39 per cent. of oxide of iron.

The principal use of asbestos is as a fire-proof material, for which purpose it has been employed from very early times. The ancient Romans and Greeks knew how to make asbestos cloth, and specimens of their manufacture are still preserved. The Greeks used it as winding-sheets for their dead. In modern times the cloth has been introduced for fire and acid-proof dresses, and one important application of it is as a packing material for piston-glands of steam engines. Millboard, useful as a jointing for steam pipes, has also been made from it, and this board is also made into gas shades. The author proceeded to describe the uses of floss asbestos for gas stoves, and as a non-conductor of heat for covering steam pipes, roofs in warm climates, &c., and concluded by referring to the combination of asbestos powder in the form of fireproof paint, as well as its uses as a filtering medium.

A short discussion followed.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

M. GIRARD, a pharmacist at Schirmeck, Alsace, is reported to have been arrested on the charge of high treason.

THE FRENCH SURGICAL CONGRESS will hold their third annual meeting on March 12, in the main amphitheatre of the Assistance Publique building, Avenue Victoria. Foreign surgeons are invited to attend. Communications may be sent to Dr. S. Pozzi, the Secretary, 10, Place Vendôme.

HOSPITAL INTERNE PHARMACISTS.—The usual announcement has been made that a competition is soon to be held for filling the annual vacancies in the Paris hospitals and asylums. March 15 is the date appointed, and the Pharmacie Centrale, 47 Quai de la Tournelle, the place selected for the competition. The programme and conditions, which will be the same as customary, have already been printed at length in former numbers of THE CHEMIST AND DRUGGIST.

PRACTICAL DARWINISM.—A Paris physician asked the other day permission to try a new treatment for consumption on the monkeys kept in the Jardin d'Acclimatation. The establishment has many such inmates suffering from phthisis, as is the case with most monkeys brought to Europe, and the doctor thought he could cure them. Although he assured the director his treatment was perfectly harmless, the permission was refused. Some of the physician's confrères say the reason of the denial is probably that the medicines had not previously been tried on the monkeys' more common and less valuable brothers, namely, men.

THE MILITARY FACULTY.—The fight continues about the "Ecole Militaire de Santé," to call it by its official name. Some papers having announced the other day that Lyons had been selected, both Nancy and Bordeaux protested that nothing was settled, and they still remained candidates for the favour. General feeling seems, however, to incline for Lyons, Nancy being too near the German frontier, and Bordeaux too far from the centre. Last Saturday Dr. Dujardin-Beaumetz, who is connected with the War Department, officially visited Lyons to ascertain the facilities and resources there afforded. The Lyonese are sure he was delighted with their city, and will cause them to get the new School of Military Medicine and Pharmacy.

GUYON'S TEST FOR ALDEHYDS IN LIQUORS.—At the last meeting of the Paris Chemical Society, M. U. Guyon proposed the following:—

Fuchsin	..	..	..	..	..	1 gramme
Water, about	..	..	..	..	..	1,000 cub. cent.
Bisulphite of soda solution of 30° B.	..	..	..	..	20 "	
Pure concentrated muriatic acid	..	..	..	..	10 "	

Dissolve the fuchsin in the water so as to obtain 1,000 c. c. of solution. To it add, first the bisulphite solution, and when the bleaching is complete, the muriatic acid. It is important that the order of mixing should not be interverted.

The reagent will keep well in glass-stoppered vials. To apply it the liquor to be tested should be reduced to about 50 degrees: then 2 c. c. of it are to be measured, mixed with 1 c. c. of the reagent, and the whole allowed to stand. When aldehyds are absent no change is observed; when they are present, the colour changes to a purplish red, all the deeper that the proportion is larger. M. Guyon says his test will show half-a-millionth of aldehyds in a liquor. The claim may be well founded; but will not the test strike a red colour with other substances than aldehyds—tannin, for instance? It is not enough that a reagent be very sensitive to a certain substance: it should be unaffected by others liable to keep it company. The criticism may appear too exacting, but it must be borne in mind that all the new tests for liquor impurities now cropping out are called forth by the 50,000f. Government reward, and intended for excise officers, not for chemists.

THE PARIS SOCIETY OF PHARMACY.

NOTWITHSTANDING the snowstorm barely ended this morning, the members gathered in goodly numbers as usual, on February 1, to attend the monthly meeting, and all the officers—viz., President Delpech, Vice-President Bouchardat,

Perpetual Secretary Planchon, and Annual Secretary Bourquelot—were on duty.

M. Champigny, after the minutes of the previous meeting had been read and adopted, complained that so long a time should elapse before a report of the Society's proceedings appeared in their official organ, the *Journal de Pharmacie et de Chimie*. While an account of the transactions was published in THE CHEMIST AND DRUGGIST three days after the meeting, it took the *Journal* six weeks, on an average, to present the same report; in fact it was the last of all papers, French or foreign, to print the proceedings.

M. Planchon explained that the delay was owing to the action of the Society itself, which had always refused to allow the minutes to be printed in the *Journal* before they had been adopted at a subsequent meeting.

M. Jungfleisch added he had often made the motion—as often defeated—to have the proceedings published in the next issue of the Society's organ. This time the motion was again offered, under the stimulus of outside competition, and carried unanimously. So that henceforth the reports of the meetings will be published in the *Journal de Pharmacie et de Chimie*, number issued on the 15th of the month, and any corrections that may be found necessary will be made in a following number.

M. Mayet communicated a process which he had received from M. Labiche for the "detection of cotton-seed oil in olive oil," a very common adulteration now-a-days. The test consists in the addition of precipitated oxide of lead and ammonia, which, after a while, causes a red colour when cotton-seed oil is present. The process had succeeded with M. Labiche, but he requested the Society to name a committee to examine it and report on its merits.

General dissent from such a proposition was expressed, the Society not being in the habit of taking action in the way requested.

The suggestion was made that the proper way, since M. Labiche is a corresponding member, would be for him to write a communication for publication describing his process, when discussion would most likely take place in due course, whereupon M. Mayet withdrew the request.

M. Jungfleisch made an important communication on the "Cinchonine Derivatives" obtained by him and M. Léger on heating the alkaloid with water, and an excess of sulphuric acid to 120° C. Pasteur had already worked in the same field, and thus discovered several new alkaloidal derivatives. But MM. Jungfleisch and Léger's intention was to complete and precise the investigations by operating on larger quantities of substance. The new bases obtained, and separated by means of solvents—such as ether, acetone, alcohol, &c.—and precipitations, were described with due particulars; and many fine crystallised specimens were shown, but, so far, they have only a theoretical importance. M. Jungfleisch remarked, by the way, that he was only speaking of the first results, and intended to say much more at a future time. M. Bourgoïn tried to draw out from him what he thought of "oxy-cinchonine," by some considered isomeric with quinine. But M. Jungfleisch, while admitting he had obtained considerable quantities of the substance, and had his own opinion, would not commit himself before further investigation.

M. PORTES read a paper on *plastering wine* which is now causing considerable discussion wherever wine is drunk and there are boards of health. To avoid the objectionable presence of sulphate of potash, and yet obtain the clarifying and necessary acidity (for Southern wines) afforded by plaster, he proposed a mixture of tartrate of lime and tartaric acid. The method is actually adopted on the large scale by Southern vintners with great satisfaction. They use simply chalk and tartaric acid in definite proportions. M. Marty, also a Southerner, thought the remedy for Southern wines would be that the men should gather the grapes before they are dead ripe, and be more careful in their manipulations.

M. BOUCHARDAT ended the meeting with an elaborate preliminary notice on his researches on oil of *spike lavender*, a much adulterated essential oil. His work, however, was of a purely chemical character, and related to the nature of the oil, its various components, and their true chemical function. Freezing was one of his separation processes. But, like Professor Jungfleisch, he confessed he was not ready yet to present his conclusions.

Obituary.

BOSWELL.—The death occurred on Monday at Balmuto, Fifeshire, of Dr. John Thomas Irvine Boswell, one of the foremost botanists of his time. Dr. Boswell was for many years curator to the Botanical Society in London, and was a lecturer at the Charing Cross and Middlesex Schools of Medicine. He re-wrote the largest work on botany in the English language—"Sowerby's," consisting of twenty volumes—upon which he was engaged for twenty years.

BRUMBY.—On January 20, Mr. John Brumby, Back Street, Gainsborough, chemist and druggist. Aged 59.

CLARKE.—We regret to have to record the death of Mr. Francis Jonathan Clarke, of Lincoln, one of the leviathans of the patent-medicine business, which occurred at Bournemouth on Saturday last. Mr. Clarke had been ill since August last, and in September he repaired to Bournemouth in the hope that the change would do him good. His illness increased, however, and for some time past it has been known to his friends that his heart and lungs were so seriously affected that his recovery was almost impossible. He was only 46 years of age, and leaves a widow and five children to mourn his loss. Mr. Clarke was born in Lincoln



in 1842. He commenced his apprenticeship to the drug business at Mansfield, but the concern to which he was articled having changed hands, he returned to Lincoln in less than two years as an improver, and for a year or two dispensed for the Dispensary. After gaining experience at Kingston-on-Thames and London, Mr. Clarke opened a chemist's shop in Newland, Lincoln, at the age of 19 years. He had no fortune to start with. A year afterwards he married. His business prospered, his expenses were kept well under, and in a few years he was able to take a shop in High Street. He had already commenced to sell his "Blood Mixture" locally. When he had saved a moderate fortune by his regular business he resolved to launch out. He risked all he had. For the first three months he spent 500*l.* a month, and for the remainder of the first year his advertising amounted to 1,000*l.* a month. At the end of the year he had spent in advertising and printing some 15,000*l.*, and his balance-sheet showed that out of that he had sunk temporarily something like 7,000*l.* But the property created was worth a great many times that amount. He still further extended his advertising, and by the end of the second year his accounts were getting about straight. From that time onward success was assured, and for nearly twenty years the sale of his patent medicine has gone on increasing, while each year more than 20,000*l.* has been invested in printing-ink. Mr. Clarke was four times elected mayor of Lincoln, and the honour was offered him for a fifth time in November 1886, but he on that occasion felt compelled to decline it.

DE BARY.—The Pharmaceutical Society has lost another of its recently-elected honorary members by the death of Professor Heinrich Anton de Bary, which took place on

January 19. The deceased gentleman, who was in his 58th year, made a visit to this country in September last, attending the meeting of the British Medical Association at Manchester. He then suffered from an affection of the jaw, which medical advisers here pronounced to be cancer. An operation was performed, but was only expected to give him a longer lease of life. We reprint the portrait of Professor de Bary which



we gave in May last, and need only repeat what was said then: that he was one of the most accomplished botanists of this generation, and made a speciality of cryptogamic plants, regarding which he was the principal authority. Since 1872 he has held the appointment of Professor of Botany at the Strassburg University.

GLANVILL.—On January 14, Mr. Robert Glanvill, Hyde Road, Manchester, chemist and druggist. Aged 61.

GRAY.—Professor Asa Gray, the eminent botanist, of Harvard University, died at Cambridge, Massachusetts, on January 28. Aged 77. He was America's greatest botanist, and one of the most eminent scientific authors whom the United States has produced. He first graduated in medicine, on the practice of which, however, he never seriously entered, preferring to devote himself to botany. He was one of Darwin's most constant correspondents, and next to Hooker, perhaps, rendered him invaluable help in solving the many knotty problems that presented themselves in the course of the long investigations that preceded the publication of the "Origin of Species." He was, moreover, one of the earliest converts to Darwinism, and its stoutest defender in the United States, where it met with much opposition from Agassiz and his school. His "Botanical Text-Book," his "Structural and Systematic Botany," his "Manual of Botany," and other text-books have gone through many editions, and are regarded as of the highest authority. In the Royal Society's List, the titles of his contributions to science occupy something like seven columns.

KUNHARDT.—The death is announced of Mr. Otto W. Kunhardt, the senior partner the of well-known firm of G. Lipman & Geffcken, wholesale export druggists, Hamburg. The business is one of the oldest upon the Continent, and has been in the family since its establishment in 1746. The deceased gentleman, who was 70 years of age, was formerly a prominent member of the city parliament, and, up to within two days of his death a familiar figure upon the Hamburg Exchange, where he was much respected. The melancholy event, which was quite unexpected, was due to heart disease. The firm will still be carried on by the deceased's son, thus entering upon the sixth generation.

LAMBERT.—On January 10, Mr. Thomas Lambert, Rippen-den, near Halifax, chemist and druggist. Aged 65.

ORMOND.—On January 16, Mr. John Ormond, Winter Hall, near Pembroke, chemist and druggist. Aged 68.

OWEN.—On January 27, Mr. Owen Davies Owen, chemist and druggist. Aged 51. Mr. Owen was for nearly thirty years the London representative of Messrs. T. & H. Smith, of Worship Street, E.C., and Edinburgh. He had suffered from a painful illness for the last twelve months.

THEW.—On January 19, Mr. Thomas William Thew, Toward Terrace, Sunderland, chemist and druggist. Aged 24.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., February 2.

GREAT tranquillity prevails in the Mincing Lane markets, and there are few changes of any importance to record, those which have occurred being mostly of a downward character. Quinine and quicksilver have further declined, but the English manufacturers of bromide of potassium have raised their price 1*d.* per lb. Sulphate of ammonia and nitrate of soda are quotably lower, but soda crystals scarce and dearer. In drysalteries we have to record a small improvement in shellac, but more or less heavy falls in China galls, Japan wax, and gambier. The gum sales to-day went off pretty well, and the extremely high prices of Turkey gums have been further accentuated, although East Indian amrad and Ghattay are a shade weaker. Gum Tragacanth is also lower. The Cinchona sales resulted in a decline. Tea and nearly all spices are cheaper. As regards oils the small advance in Ceylon cocoanut oil is more than balanced by a reduction in Turpentine, Petroleum, and Linsed Oil. Saffron and essential oil of cubebs have advanced, while insect flowers, oil of cloves, and oil of lemon are lower.

MANUFACTURE OF SPIRITUOUS PREPARATIONS IN BOND.—Several months ago we were able to announce that the Chemical Section of the London Chamber of Commerce had approached Government with a view of obtaining facilities for the manufacture of spirituous preparations in bond, and the allowance of a drawback on such goods if exported. A reply has now been received from the authorities in answer to the suggestion of the Chamber of Commerce, and will be discussed by the Chemical Section of that body at an early date. The official proposals are said to be of such a nature that English druggists will in future be fully enabled to manufacture for themselves, and in this country, the preparations which they have hitherto been compelled to have manufactured on the Continent.

It is proposed to establish a terminal market for colonial and foreign produce in London, commencing with coffee and sugar. The undertaking is to be founded, it is said, on the basis of the "Caisse de Liquidation," which has now been in existence for many years at Havre, and is claimed to have greatly contributed to raise that port to its present eminence as a coffee market. Similar establishments exist at Hamburg, New York, and Antwerp, and also, on a smaller scale, in Holland. It is said that the London scheme is being actively promoted by such powerful houses as N. M. Rothschild & Sons, Baring Brothers & Co., J. Henry Schröder & Co., Fred. Huth & Co., Wogau & Co., Kleinwort, Sons & Co., Antony Gibbs & Sons, and Frühling & Goschen. The clearing-house, if established, will probably be worked on the Havre principle, receiving an appropriate deposit for each transaction from both buyer and seller, and calling upon each of the parties to make good daily any deficit occasioned through a change in the market, under pain of voiding the contract and loss of an equivalent amount of the stake money.

GLASS-BOTTLE MAKING BY MACHINERY.—The *Yorkshire Post* in its issue of February 1 discusses the prospects of the new system of making glass bottles patented by Mr. H. M. Howard, of which a description was given in a recent issue of THE CHEMIST AND DRUGGIST. According to our contemporary the Castleford glass-blowers are not at all sanguine about the success of the machine, which, it is said, has until now been engaged exclusively in making wide-mouthed jam

bottles and pickle jars. The local glass-blowers contend that owing to the time required for pouring metal into the moulds, and the consequent liability to cooling, the base of the jar, which should be the strongest part, is the weakest. The *Yorkshire Post* also criticises the prospectus of the company which has been formed to promote the invention, alleging that some of the guiding spirits who promote that company have been connected with several other companies that "have not been lucrative investments for the public, whatever they may have been for the promoters," and adding: "If anyone cares to take the trouble to turn back to our comments of January 28, he will see that we pointed out that in 1886 a company was formed with a capital of a quarter of a million, and that in January 1888 a company is introduced with a capital of 200,000*l.*, to acquire from company number one the property which was there to be represented by a capital of 50,000*l.* more than is now sought to be raised. In the interim it would appear that certain patents for manufacturing bottles by mechanical processes had been secured. A prudent investor naturally desires to know how much of the 157,440*l.* which is to be paid to the vendors of the works, plant, and patents is to be apportioned to the business acquired, and how much is to be paid for the patents. On this subject there is no information in the prospectus. Next, considering that the claim is put forward that the company 'take over the old-established business and works,' one naturally desires to know what the profits of the old-established business have been, and what has been the output. But here, again, the prospectus is silent."

The improvement in steam-freight rates, upon which we commented a short time ago, has been barely maintained, so far as the homeward trades are concerned, and at present, according to a recent report, freights from all the Indian ports, as well as from Java and Manilla, to Europe have fallen very low. West Indian freights are fairly well maintained, but from North America, Brazil, and the River Plate trade is very slack. Outwards, however, a large business has been done, and rates keep well supported for Japan, China, India, and Mediterranean.

ACID (CARBOLIC).—Both the crude acid and the crystals remain firm, but there are not many buyers for the latter for forward delivery, as there is little faith among consumers in the continuance of the present rates of 1*s.* 1½*d.* to 1*s.* 4½*d.* per lb. for bulk, and 4*d.* per lb. extra for bottles.

ACID (CITRIC).—The market is quite flat, and as low a price as 1*s.* 7½*d.* per lb. is quoted; but an inquiry for 10 tons which was going about early in the week could not, we understand, be executed at that price, and for any lot of importance it is likely that 1*s.* 7¾*d.* would have to be paid.

ACID (OXALIC).—The price keeps steady at 4*d.* to 4½*d.* per lb., while *Sal acetos* is nominally held at 6*d.* per lb.

ACID (TARTARIC).—There is practically no trade doing. For *Foreign* acid 1*s.* 6½*d.* per lb. is the nearest quotation, and 1*s.* 6¾*d.* to 1*s.* 7*d.* per lb. for *English*.

AMMONIA SALTS.—Carbonate remains very neglected, at 4*d.* per lb., in casks, less a discount. *Sal ammoniac* sells fairly well at 34*s.* for firsts and 32*s.* for seconds. *Sulphate* again lower, closing at 12*l.* 11*s.* 3*d.* to 12*l.* 15*s.* for 24-per-cent. grey in London. At Hull the price is 12*l.* 7*s.* 6*d.* per ton.

ANISE.—A fair trade in small and medium parcels at steady prices is reported. *Spanish* seed is held at 50*s.* to 53*s.* per cwt.; *Chilian*, at 22*s.*; and *Russian* seed, at 21*s.*

ARSENIC is rather scarce, but still remains quoted at 11*s.* 6*d.* per cwt. for white powder.

BLEACHING POWDER.—The reports that the output is to be further restricted by 10 per cent. continue to find currency, although no authentic confirmation has been forthcoming. In the meantime the market has become rather weaker, 8*l.* 10*s.* here, and 8*l.* 7*s.* 6*d.* on the Tyne.

BORAX.—A fairly steady business is doing, 30*l.* to 32*l.* being named as the price for English refined.

BROMIDE OF POTASSIUM.—English makers have raised their quotations to 1*s.* 7*d.* per lb., which is now the price of

Howards and *Atkinson's* brands, but *German* still offers at 1s. 6d. per lb.

CAMPHOR.—*Refined* remains unaltered in price, but the makers are very firm. *Crude Japan*, without much business, at 87s. 6d. to 90s. per cwt. on the spot. The arrivals have lately been rather heavy (over 800 packages being brought in per *Pembrokeshire*), but it is said that most of this had already been sold before arrival.

CANARY SEED.—In this article a rather active trade is being done, mostly in *Dutch* seed, of which pretty nearly all that was offered from Holland for prompt delivery has been bought up, the ready sale for this variety preventing any quotable change in value, although the quantities brought to market in Holland are very heavy. The arrivals in London and Hull during the last fortnight are about 1,500 bales, while in Liverpool about 1,000 bales of *Turkish* seed were landed. Holders of the latter description must feel the Dutch competition very keenly, as but for that the trade would have been obliged to fall back on *Turkish* stocks. The export trade is quiet, most countries supplying their wants directly from the Dutch markets. The States are well supplied, and their limits for fresh purchases are considerably below our own current, though nominal, rates. *Turkish* seed is now held at 45s. to 47s.; *Dutch*, at 44s. to 47s.; *Morocco*, at 50s.; *La Plata*, at 42s. to 43s.; *English*, at 44s. to 48s.; and *Spanish*, at 50s. to 54s. per 464 ex warehouse. Of the latter description some very fine parcels are offered just now.

CARAWAY SEED.—Business continues steadily at the previous quotations, an advance being prevented by the heavy available supplies of *Dutch* seed, which is held at 27s. to 28s. for the best quality. *English* seed is worth from 29s. to 30s. *Russian*, 22s. to 24s., and *Mogadore*, 25s. per cwt.

CHAMOMILES.—Very little business is doing, and prices may still be quoted at 95s. to 125s. for new, and 62s. 6d. per cwt. for old Belgian flowers.

CINCHONA.—At the fortnightly auctions on Tuesday, a total supply of 3,533 packages was catalogued, composed of 1,727 packages South American, 1,143 Ceylon, 444 Indian, and 219 Java bark. The demand was very slack, and neither holders nor buyers appeared particularly anxious to come to business; in fact several parcels of Ceylon bark were withdrawn altogether. Barely 1,000 packages, all told, were disposed of at a unit which, according to the more or less sanguine views of parties, is quoted at 2d. to 2½d., but seems to be rather nearer the lower quotation, being a fall in value of about ¼d. The principal buyers were Messrs. Böhringer & Son's agents, but part was also bought for American and English quinine manufacturers. The following prices were paid:—**CEYLON BARK:** *Succirubra*, dust, 1d.; branch, 1½d.; chips, young, weak, and quilly, to fine bright, 2d. to 4½d.; shavings, mixed, 2½d.; fair, 3d.; good, 3d. to 5½d.; root, 2½d. to 3½d.; quill, common broken to papery dull in cases, 3d. to 6d.; renewed 3½d. to 8½d. *Officinalis*, branch, 1d. to 3d.; common to good bright stem chips, 3d. to 5½d.; shavings, 5½d.; root, 7d. to 8½d.; renewed, medium fine, 6½d. to 11d. **INDIAN BARK:** *Succirubra* branch and chips, ordinary to good quilly, 2d. to 5d.; shavings 6d., renewed 5d. to 9d. *Officinalis* chips 4d. to 6d., shavings 5½d., renewed 6d. **LEDGER**, some fine rich spoke shavings 1s. 2d. per lb. **JAVA BARK:** The assortment offered was a fairly good one, but sold principally at easy rates, viz.: *Ledger* good small quilly to fine bold rich chips 3½d. to 11d., root 9d. to 10½d. *Succirubra*, chips 4d., root 3½d. per lb. **SOUTH AMERICAN BARK:** More than one half of the supply consisted of old *Cuprea* bark, which was all bought in, as also were small lots of *Pitazo* and *Carthagena* bark. Of 579 packages, *Celisaya*, including 50 imported via Hamburg, a small proportion from the Bolivian plantations sold, ordinary quill mostly branch and rather broken, at 5d. to 7½d., good at 10d. to 11½d., and fine bold druggists' quill at 1s. 5d. per lb. A parcel of quill and flat red bark sold 4s. 1d. to 5s. 2d. per lb. for good to fine bold, 1s. 11d. to 2s. 6d. for fair partly damaged. The shipments from Ceylon from the commencement of the season (October 1) to January 5 are given as follows:—1887-88, 2,424,015 lbs.; 1886-87, 3,665,662 lbs.; 1885-86, 4,820,030 lbs.; 1884-85, 2,137,646 lbs.

COCAINE.—German brands are still offering at 9½d. to 10d.

COCHINEAL remains very quiet, and we do not hear of

much business. Fair to fine silver *Teneriffe* is worth 1s. 1d. to 1s. 4d. per lb., and blacks, from 1s. 1d. up to 1s. 8d. per lb.

COPPER (SULPHATE) is obtainable at 20l. 10s. to 21l.

CREAM OF TARTAR in fair demand, at 127s. for first white and 124s. for seconds. Our market is now rather better supplied than it was some time ago.

CUBEBS.—Stocks are extremely low everywhere, nor is there any appearance of important shipments. On our market 28l. per cwt. is asked for good genuine berries, with small transactions at that price.

CUMIN SEED without alteration, at 48s. to 49s. per cwt. for *Maltese*, and 36s. to 38s. per cwt. for *East Indian* seed.

FENUGREEK SEED.—The export demand continues very brisk, *Morocco* seed finding ready buyers at 8s. to 9s., according to quality, while *Egyptian* is obtainable at 6s. 6d. to 7s. per cwt., the latter price for new seed.

GALLS.—There has been a heavy fall in *China* galls, owing to the increase of available supplies, and at the auctions 312 cases sold, without reserve, at 59s. to 62s. for dull very broken to good pale mixed with broken, which is about 10s. per cwt. below the rates recently paid privately.

GAMBIER a turn cheaper, with sales at 22s. 3d. per cwt. for block on the spot.

GAMBOGE.—Another consignment of 18 cases arrived per *Menclaus* from Hong Kong this week. It is said that the 24 cases bought in at 20l. at the last auctions, and which are not of very desirable quality, are limited at 15l. per cwt.

GLYCERINE.—The manufacturers have made no alteration in their quotations, but it is said that for crude French glycerine higher prices are asked.

GUM ARABIC.—Prior to the public sales held to-day, which included 2,373 packages, there prevailed a rather brisk inquiry for Turkey sorts, and holders of the small available stock advanced their quotations to 18l. for the best quality. *Gezirah* gums are also dearer, and there are no sellers now under 100s. per cwt. A very fair demand prevailed at to-day's auctions, although the prices which ruled at the last public sales for East Indian gums were not quite obtainable, and both *Ghatti* and East Indian *Amrad* sold at a decline. For *Turkey* sorts, however, more money is required. About 700 packages Bombay gum were disposed of at 120s. to 80s. for good to very fine bright *Ghatti*, 65s. to 68s. for fair, and down to 58s. 6d. for dark and woody ditto. Siftings, ordinary to good pale, 36s. 6d. to 58s. East Indian *Amrad* realised up to 6l. 2s. 6d. for fine bright bold frosty, 92s. to 75s. for good to reddish amber drop, 67s. to 60s. for dark red and dusty drop, and 55s. to 48s. for ordinary blocky and dark. African *Amrad* bought in. About 50 bales Aden sorts sold at 6l. 10s. to 6l. 15s. for good to fine pale but olibanum scented. Samples of a heavy shipment of *Brazilian* gum (imported from Pará) are now on show in Mincing Lane for sale by private treaty. We understand that there are nearly 50 tons of this gum, which is of good strong quality and extremely like the red Australian gum in appearance, so much so that some pieces are scarcely distinguishable from the latter. Others, however, are rather darker and of a blocky character. We are in possession of the following from Cairo, dated January 23:—Two small parcels of Arabic and *Gezirah* sorts, not free from sand, which were still to be had in our market, have now been sold, the former at a parity of 256s., and the latter at 97s. per cwt. A small lot of 31 serons *Gezirah* arrived lately, for which 97s. was offered, but declined by the owner. No further supplies are expected at present. In *Red Sea* gums our market continues very brisk. Nearly all the available gums have been disposed of at prices indicating a continued advance, actual rates varying from between 70s. to 116s. per cwt. for sorts, f.o.b. *Alexandria*, according to quality. Scarcely anything now exists in the producing countries, where a great rise has taken place. The Cairo stock has now been reduced to 164 serons only, and hardly any additions to it are expected for some time to come.

GUM EUPHOREBIUM.—The Morocco steamer which has just arrived brought 87 packages, mostly from Mogador, a few from Mazagan.

GUM TRAGACANTH.—At the auctions last Friday prices declined nearly 5s. per cwt. all round, and of the 1,703

packages catalogued very little was sold. The prices paid were 8*l.* 15*s.* for fair pale *Syrian* firsts; 7*l.* 10*s.* for fair seconds; 6*l.* 7*s.* 6*d.* to 6*l.* 12*s.* 6*d.* for fine pale thirds; 6*l.* 2*s.* 6*d.* to 6*l.* 10*s.* for good reddish ditto; 5*l.* 10*s.* to 6*l.* for fair to good palish thirds; 90*s.* to 5*l.* 12*s.* 6*d.* for ordinary to good red ditto; 87*s.* 6*d.* to 5*l.* 2*s.* 6*d.* for common thick to good fourths. Pickings realised from 35*s.* to 5*l.* 10*s.* per cwt.; vermicelli, 97*s.* 6*d.* to 5*l.* 5*s.* per cwt. At Smyrna on January 20 the market was firm, especially as regards good and medium qualities, and the stock amounted to 320 cases.

INDIGO.—Since the last auctions a few parcels of the new arrivals from Calcutta have been placed in the country at the full rates, but beyond this there is nothing to report.

INSECT-FLOWERS.—Advices received from Trieste this week mention a fall of 10*s.* per cwt., and prices now stand at 202*s.* for open, 210*s.* for half open, and 212*s.* for closed flowers, London terms. The arrivals at Trieste during the season 1887 have nearly equalled those of the previous year, while the deliveries have only reached half of those of 1886.

IODINE.—There is no alteration in the market, 9*d.* per oz. being quoted for *Crude*, 13*s.* 6*d.* per lb. for *Resublimed*, and 11*s.* 3*d.* per lb. for *Iodide of potassium*.

IPEACUANHA.—*Via* Antwerp we received this week a further consignment of 20 cases.

LINSEED must again be quoted 1*s.* dearer for *East Indian*, present quotations being 40*s.* 6*d.* for Bombay, and 39*s.* 6*d.* for Calcutta seed; *La Plata* seed is offering at slightly lower rates, viz. 38*s.* to 38*s.* 6*d.* per 416 lbs. *Dutch*, steady, at 43*s.* to 45*s.*, and *Sicilian* at 45*s.* to 46*s.* White linseed sells pretty briskly.

MARSHMALLOW ROOT is dear, and considered likely to rise still higher as the year advances, the crop having been a very short one indeed.

MUSTARD SEED.—Of *Bombay* seed there is nothing available on the spot, but the new crop is offered for shipment in April-May. *Californian* mustard seed is quoted at 9*s.* 6*d.*, and *English* at 8*s.* to 11*s.* per bushel, according to quality.

OIL (CASTOR).—On our market prices keep steady at 4½*d.* for finest Calcutta. In Liverpool seconds are selling pretty briskly at 2½*d.* per lb. Advices from Calcutta dated January 10 speak of a very firm market without unsold stocks, while fine seed is very scarce, and the production of oil has been mostly engaged for local consumption.

OIL (COD LIVER).—No reports concerning the commencement of the fishing have yet been received from Norway, but the feeling here is very firm.

OILS (ESSENTIAL).—There is little news to report this week. Italian oils are a shade weaker, especially *lemon*. Oil of *cubeb* has advanced in sympathy with the crude material, while that of *elocres* is lower for a similar reason. Concerning French essential oils nothing new can be said. The price quoted last week for American oil of *peppermint* (HGH) should have been "c.i.f." instead of on the spot, 11*s.* 6*d.* per lb. being quoted in the latter position.

OILS (FIXED).—The Ceylon variety of *Cocanut* oil is again dearer, and worth from 24*l.* 15*s.* to 25*l.* on the spot for fine quality. Cochin oil, on the other hand, is neglected, and obtainable at 28*l.* to 29*l.*, according to quality. Mauritius nominal, at 24*l.* 10*s.* *Cottonseed* steady, at 18*l.* 10*s.* for crude, and 20*l.* 15*s.* for ordinary refined on the spot; Feb.-April, 20*l.* Hull, spot, 19*l.* 10*s.*; Feb.-April, 19*l.* 17*s.* 6*d.*; May-August, 20*l.* 17*s.* 6*d.*; crude, 17*l.* 5*s.*; Feb.-April, 17*l.* 5*s.* to 17*l.* 10*s.* The inquiry for *Linseed* oil is a restricted one, and prices have fallen, though they close steady—spot, 18*l.* 15*s.* to 18*l.* 17*s.* 6*d.*; landed, up to 19*l.* Hull, spot, 18*l.* 15*s.* to 18*l.* 17*s.* 6*d.* *Rapeseed* steady at unchanged rates. Brown English on the spot, 24*l.* to 24*l.* 5*s.*; refined, 25*l.* 15*s.* *Olive* oil firm, with fair inquiry: Mogadore, 34*l.* to 34*l.* 10*s.*; Spanish, nominally, 37*l.*; Levant, 34*l.* to 35*l.* *Palm* oil quiet, at 22*l.* for fine Lagos. *Turpentine*, American spirits on the spot a turn weaker, at 28*s.* 6*d.*; Feb.-April, 28*s.* 6*d.* to 28*s.* 9*d.*; March-April, 28*s.* 9*d.*

OIL (PETROLEUM).—*American* on the spot is slightly easier than last week, but closes steadily at 6½*d.* to 6¾*d.*; February, 6½*d.*; March-April, 6¾*d.* A very considerable business is reported in *Russian* oil for arrival at 6½*d.* to 6¾*d.*

Of Russian petroleum 112,429 barrels were imported into London last year, made up of the following brands: New era, 54,050; sunbeam, 18,633; white star, 15,283; lustre, 12,719; crown, 11,744. The total import into the United Kingdom was 183,157 barrels, thus distributed:—London, 112,429 barrels; Liverpool, 62,540 barrels; Bristol, 5,188 barrels; Dublin, 5,547 barrels; and Belfast, 2,500 barrels.

OPIMUM.—No news can be reported as regards the position of our market. On January 20 there were rumours current at Smyrna that the winter sowings had been greatly damaged by frost, but from a usually well-informed quarter we hear that the injury caused to the crop in the growing districts had not been very serious up to the present. Holders at Smyrna appear to be very firm, and in the week ending January 20 only about twenty baskets had changed hands at the parity of 14*s.* 10*d.* to 15*s.* 6*d.* for new opium, and 11*s.* 4*d.* to 11*s.* 11*d.* for tale quale. Arrivals up to that date 770 baskets against 4,075 on the same day of the previous year.

POTASH SALTS.—*Bichromate* still rules at 4½*d.* per lb. *Chlorate* remains neglected at 6*d.* to 6½*d.* per lb. *Nitrate* (refined salt petre) is quoted at 21*s.* to 21*s.* 9*d.* per cwt. for powder, according to packing; yellow *Prussiate* unchanged at 7½*d.* to 7¾*d.* per lb.

QUICKSILVER closes quietly at 8*l.* 17*s.* 6*d.* to 8*l.* 15*s.* per bottle in the second hand. The fluctuations since our last report have been but few and unimportant. The importers hold at nominal prices.

QUININE.—*Howard's* brand remains unaltered, at 2*s.* 6*d.* for bottles and 2*s.* 4*d.* for bulk; *Pelletier's* offering 2*d.* per oz. below these prices. In *German* quinine some 30,000 to 35,000 oz. of the B & S brand have been sold for delivery from February till June at 1*s.* 9*d.* per oz., a decline of 1*d.* per oz., and to-day it is reported that the agents for this brand were even offering at 1*s.* 8½*d.* and 1*s.* 8*d.* per oz.; but we have not been able to confirm the accuracy of this statement. The other German manufacturers appear less anxious to sell, and simply look on.

RAPESEED is getting scarce, and up to 50*s.* is paid for fine *English* seed, medium qualities realising 45*s.* to 46*s.* per 424 lbs. Foreign seed is not much inquired for, although it may be had at 49*s.* Brown Calcutta on the spot is worth 37*s.* 6*d.* to 38*s.*; yellow mixed, 40*s.*

SAFFRON is gradually improving in price. The best Valencian quality is held at 48*s.* 6*d.* per lb. now.

SHELLAC.—After the close of our last report business was done in T. N. *second orange* up to 52*s.* c.i.f. for January to March shipment, and at 49*s.* c.i.f. for near at hand. A further improvement then set in, and at Tuesday's auctions only 408 cases were actually offered, although a considerably larger quantity had been previously advertised. Of the quantity actually catalogued, 180 chests sold at an advance of 2*s.* on orange lac, and 1*s.* on garnet, as compared with the prices paid at the previous auctions. *First orange*, good pale G in double triangle, sold at 65*s.* per cwt. *Second orange*, fair unworked, rather blocky, 50*s.* per cwt. *Garnet* A. C., unworked and blocky, 43*s.* 6*d.*; B. C. B., out of condition and unworked, 42*s.* 6*d.* to 43*s.* *Button lac*, dark to fair first, 59*s.* to 61*s.* Privately, business is practically at a standstill; but since the publication of the January statistics, which show a considerable excess of imports over deliveries, the market has again given way, and for T. N. standard orange on the spot 48*s.* 6*d.* to 49*s.* 6*d.* has been accepted, with 51*s.* c.i.f. terms for arrival, February-April shipment. The January shipments from Calcutta to the United Kingdom are stated at 9,400 cwts.

SODA COMPOUNDS.—*Ash* is firm and not very easily procurable at 1½*d.* to 1¾*d.* per cwt. per degree, landed in London, and 1*d.* on the Tyne. The price of *Bicarbonate* is fairly well maintained at 5*l.* 15*s.* to 6*l.* per ton, and business remains pretty good. *Bichromate* held at 3½*d.* per lb. In *Caustic* there is no change to report, the market remaining very flat; 7*l.* for cream, and 7*l.* 5*s.* to 7*l.* 10*s.* for 60 per cent. are the current quotations. *Crystals* in demand and dearer on the spot, and for early delivery very little is obtainable. Quotations 47*s.* 6*d.* ex ship in London, and 40*s.* on the Tyne. *Nitrate* somewhat easier at 9*s.* on the spot in London.

SPICES.—The heavy fall reported last week has been slightly accentuated on most articles, and a languid feeling

prevails. At the auctions *Arrowroot* was without demand, although privately $1\frac{1}{2}d.$ per lb. was paid for common St. Vincent. *Cassia lignea*, forced for sale without reserve, declined nearly 2s. per cwt., 1,247 boxes selling at 23s. 6d. per cwt. to 24s. for good old, and 22s. 6d. for ordinary new. *Cinnamon chips*, $2\frac{1}{2}d.$ per lb. for damaged. *Cloves* firm, to $\frac{1}{2}d.$ dearer, with small sales at $8\frac{1}{2}d.$ to $8\frac{3}{4}d.$ for fair to good Zanzibar, holders seeming less anxious to sell. In *Ginger* little is doing; *Cochin* cuttings sold at 16s., and good lined Japan at the same price. *Mace* cheaper; fair red Penang, 2s. 5d. to 2s. 6d. per lb. *Nutmegs* also lower. Bombay 80 to 115, 2s. 9d. to 2s.; West Indian fine 63s, at 3s. 6d.; 75s to 93s, at 2s. 8d. to 2s.; long 88s to 156s, at 2s. 4d. to 1s. 3d. *Black pepper* flat; Atcheen lower, at $5\frac{1}{2}d.$ for $15\frac{1}{2}p.c.$ dust; fair Singapore, $7\frac{1}{2}d.$; Aleppy, $7\frac{1}{2}d.$ to $7\frac{3}{4}d.$ *White pepper*, after having sold privately at steadier rates, has again fallen to the level of last week's sale prices—viz. ordinary to fair Penang, $8\frac{3}{4}d.$ to 9d.; dull Singapore, at $10\frac{3}{4}d.$ *Pimento* barely steady; fair to good, $2\frac{3}{4}d.$ to $2\frac{1}{2}d.$ per lb.

STICKLAC.—At the auctions 247 cases sifted *Siam* lac were bought in at 40s. to 45s. per cwt.

STRYCHNINE.—German brands are still obtainable at 2s. 5d.

TEA.—*China* tea is still further depressed this week. Sales are heavy, and on Monday N.S. Shantams sold at $3\frac{1}{2}d.$ Common N.S. Kaisows fetch $3\frac{1}{2}d.$ to 4d., and Packlings sell as low as $5\frac{1}{2}d.$, though all finer grades of Packing are extraordinarily scarce and dear, and most difficult to buy. On Tuesday (with 22,727 packages catalogued for public sale) a very depressed tone prevailed, several useful first crop Monings under 8d. showing a marked decline, though there is room in these grades for a greater fall yet, and N.S. Kaisows and Monings from $4\frac{1}{2}d.$ to $5\frac{1}{2}d.$ showed excellent value. A number of old season's scented capers have been sold in public sale at ruinous rates to the unlucky holders, useful old tea selling at $4\frac{1}{2}d.$, and good speckly capers of last season fetching $6\frac{1}{2}d.$ to $6\frac{3}{4}d.$ Business by private contract is slow, though transactions are reported in good first crop Monings over 10d. Green teas are in moderate supply, and very firm. With much smaller sales for the week, *Assams* have sold at firm rates again, and the weakness has been recovered. Telegrams from Calcutta dated January 31 give the total amount for the season available for export as 83,250,000 lbs. *Ceylons* are in fairly plentiful supply, and but little attention is being paid to them, many lots being knocked down really below their values. Teas for price, however, remain unaltered. A Mauritius planter, Mr. Louis de Rocheoute, has succeeded in growing tea on his plantations. This Mauritius tea is stated to be of excellent quality, and may ere long be brought into the market.

TURMERIC, without any improvement; 1,320 bags *Madras* bought in at 9s. 6d. to 10s. 6d. for dull wormy to bright tinger; 19 bags *Cochin* damaged split bulbs sold at 5s. 6d.

VALERIAN ROOT has rarely been so cheap as at present, nor does it appear likely that higher rates will rule in the near future.

VANILLA.—Dr. C. Peters, President of the German East African Company, writes from Zanzibar that vanilla cultivation has been successfully tried at one of the German settlements, and that 55 lb. vanilla from the Knigaru (Usanbara) settlement are ready for shipment to Germany by the first steamer.

WAX (JAPAN).—The downward tendency continues, and at the auctions 65 cases were all bought in, good palish squares at 56s. per cwt.

MEN of science are not always economical. The cost to date for publishing and compiling the reports of the *Challenger* expedition, of which, happily, the last three volumes will soon be issued, has already exceeded 200,000l.—*Truth*.

THE PARTNERSHIP EXISTING BETWEEN MESSRS. PASCAL AND GATTIN, essential-oil distillers, of Sommières (Gard), France, has terminated by effluxion of time. Messrs. César Pascal, Léon Pascal, and Alfred Lafond have taken over the business of the late firm, which they will continue under the style of C. Pascal & Cie. The firm, who are the proprietors of the popular "Excelsior" brand of lavender oil, continue to be represented in this country by Mr. H. Rubeck, of 14 Mincing Lane, E.C.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of the principal drugs in the Port of London on January 31, 1883, and to the imports and deliveries from January 1 to January 31, as compared with the preceding year:—

Article	Stocks		Imported		Delivered	
	1883	1887	1883	1887	1883	1887
Aloes	4,856	5,239	420	536	775	386
"	3	12	—	—	4	—
"	4,777	—	98	—	—	10
Anise, Star ..	181	250	—	12	—	1
Arrowroot	12,927	11,669	1,023	992	1,059	1,199
" bxs & tins	7,677	5,855	293	1,509	662	159
Balsams ..	573	669	9	—	45	22
Bark, Medicinal						
cks & cs	12,388	8,845	2,819	3,445	1,764	2,471
snrs, &c.	49,423	55,155	3,926	3,855	2,788	3,179
Borax	487	1,010	—	81	—	145
Calumba	2,694	1,572	—	162	104	117
Camphor	2,033	6,107	973	1,117	869	1,186
Cardamoms ..	811	730	246	339	158	225
Coc. Ind. bgs, &c.	275	440	—	—	11	—
Cochineal snrs, &c.	5,821	6,876	831	475	320	461
Cream of Tartar	13	41	—	—	3	42
Cubebs	71	41	—	3	42	54
Dragon's Blood	89	135	—	17	10	18
Galls, China, &c.	1,798	2,390	55	33	41	236
Trky & Prsn sks	2,292	4,103	94	435	772	257
Gum—						
Ammoniac pkgs	222	181	—	—	14	8
Animi & Copal						
pkgs	5,319	5,432	1,468	166	559	986
Arabic	11,673	15,311	2,067	1,319	1,669	1,393
Asafetida ..	442	757	—	—	8	20
Benjamin ..	1,593	1,595	335	154	272	125
Damar	3,437	5,845	510	390	495	400
Galbanum ..	—	9	—	—	—	—
Gamboge ..	97	105	40	9	8	11
Guaiacum ..	69	50	—	1	10	1
Kino	85	108	12	4	3	7
Kowrie	512	637	237	58	225	194
Mastic	111	119	6	—	—	2
Myrrh	494	338	14	—	48	71
Olibanum ..	4,527	4,233	874	930	331	323
Sandarac ..	1,214	1,254	237	130	72	123
Tragacanth ..	2,024	751	633	324	513	197
Indiarubber, E.I.						
tons	287	104	58	24	25	51
Madagascar ..	33	24	19	20	7	5
S. American ..	135	53	42	30	27	14
Mozambique ..	631	281	152	67	95	76
African, &c.	11	—	7	—	22	—
Total	1,100	462	278	141	176	146
Indigo, East Indian						
chts	8,887	10,205	2,436	1,777	1,846	2,204
" Spanish snrs	4,648	3,817	3,015	1,992	202	204
Ipecacuanha ..	120	21	12	45	50	95
Jalap	145	149	—	—	—	13
Lac Dye	6,970	7,829	—	—	196	14
Myrabolans ..	9,811	8,436	367	1,206	1,101	730
Nux Vomica pkgs	310	605	215	34	451	128
Oils—						
Anise	61	153	30	—	21	22
Cassia	152	85	40	—	51	14
Castor	799	629	26	101	73	70
"	8,526	6,701	1,971	1,125	960	893
Cocoa-nut	2,048	1,483	720	415	495	232
Olive	686	841	130	319	123	309
Palm	230	180	30	17	7	7
Opium	1,906	2,088	26	204	121	223
Rhubarb	1,065	1,782	48	49	117	123
Safflower	331	399	—	46	28	72
Sarsaparilla ..	540	529	189	205	70	131
Senna	2,371	1,044	184	484	320	302
Shellac, Orange						
chts, &c.	44,398	37,771	4,979	3,141	2,573	2,216
Garnet	16,179	12,322	1,353	1,080	390	369
Button	11,239	11,050	869	437	688	895
Total	71,816	61,143	7,146	4,658	3,621	3,480
Sticklac,	4,433	4,190	92	—	50	20
Gambier	1,824	1,367	1,433	925	1,543	1,205
Cutch	1,430	1,265	662	237	175	310
Turmeric	2,649	2,008	35	211	13	113
Vermilion, chts, &c.	51	40	7	—	19	14
Wax, bees'	733	1,178	3	47	82	40
snrs	1,651	1,440	73	359	190	254
cks & cs	42	89	24	—	—	—
cakes	1,165	1,299	362	30	110	150
Wax, Japan						



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest; we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

The Brompton Hospital Prescriptions.

SIR,—My attention has been drawn to a correspondence in your paper on the subject of giving prescriptions to ex-patients of this hospital. By a regulation of this institution, the physicians always decline to give such prescriptions, because they cannot be responsible for their action upon patients whom they can no longer see, and the symptoms of whose case may have materially altered after leaving the hospital. When an in-patient leaves he is given a supply of medicine for a fortnight. He may then become an out-patient, and continue to be treated by the hospital; but in every case the principle—which is surely a salutary one—is adopted that no patient can be successfully treated who is not seen periodically by the physician. This is quite independent of the fact that only those who are either in-patients or out-patients can receive benefit from the hospital; no others have any claim upon it.

It may be stated that the Hospital Pharmacopœia (which contains a large number of useful prescriptions) is published, and may be easily obtained by anyone who desires to purchase a copy.

I am, yours, &c.

Brompton Hospital,
February 1.

HENRY D. WAUGH, M.B., &c.,
Resident Medical Officer.

Mr. Ince's Formulæ.

SIR,—Let me answer two inquiries in one note. The external application called Locock's Lotion for the Hair was devised by Mr. Alexander, the celebrated oculist, for the benefit of his wife. It was seen by Doctor (afterwards Sir Charles) Locock, who recommended it to his friends, and thus it gained its name. The formula marked (1) was the original in Alexander's handwriting. The proportion of oil of mace, 5-s. ($\frac{1}{2}$ oz.), to a 4-oz. lotion was found too large, and was soon altered.

The hair lotion supplied to Sir Charles and others was made according to the following working formula:—

Ol. macis	3v.
Ol. olivæ	3xx.
Aq. ammon. fort.	3xx.
Sp. rosmar.	3xl.
Aq. rosæ, ad	2 gallons imperial

The mixing is a test of dispensing skill; when finished it should be cream white and should show no signs of a tendency to deposit.

The working formula for tincture of myrrh and borax is as follows:—

Boracis pulv.	3ij.
Glycerini	5iv. (by measure)
Tinct. myrrhæ	3xxxij.
Spir. rect.	1 gallon
Aq. destillat.	1 gallon
Eau de Cologne	3xx.
Tinct. krameria	3j.
Syrup. simpl.	3viij.

Misc secundum artem.

11 St. Stephen's Avenue,
Shepherd's Bush, W., January 29.

JOSEPH INCE.

Locock's Lotion.

SIR,—I have a very old recipe which is almost identical with your No. 1, but gives aque ammon. carb. as the alkali. copied it from my master's book in 1861. Yours truly,
HEDER.

Shop Decoration.

SIR,—Having, twelve months ago, fitted up a branch in our suburbs, I tried an experiment, and gained a pretty effect, by painting the walls a dead pale green, with a deep stencil frieze in chocolate all round. The shelves were in deal, under-painted the same green, and edged with chocolate. The cornice and pilasters were in good pitch pine, the former moulded and neatly stencilled in maroon, the latter flat, relieved in similar stencil top and bottom; both were varnished. The shells and framework of drawers and lockers were deal, painted in chocolate. The fronts of the drawers were veneered with rich varnished pitch pine, and bronzed hand-pulls of a neat pattern were used instead of knobs. The window enclosures were painted black and chocolate, and glazed in cut ground glass. The counter fronts are in the same colours, well moulded, and with large panels of the varnished pine veneer, and each panel has a light stencil at the corners. My poison closet is in the middle of the shelving over the fireplace, and is long and narrow, and the door is panelled to match the counter front. All the glass cases are ebonised and oak, linoleum and bent-wood chairs to match are on the floor. The ointment jars, acid and oil bottles are from Poth's, with burnt-in or porcelain labels, and the rest of the bottles are recess-labelled York bottles. The general effect is regarded as exceedingly pleasing, neat, and clean. The pitch pine is darkening, and looks more beautiful than when new. The nature of outside decoration depends, to my thinking, on the front—whether that be wholly wood, or, as my case, mostly stone and iron.

Yours faithfully,

LEAP YEAR. (251/56.)

Clearing Waste-water Pipes.

SIR,—In a domestic difficulty of that nature I always pour a few ounces of oil of vitriol down the pipe, which soon clears and disintegrates the *débris*, then easily flushed away. This is as effectual and much more economical than "Heder's" 7 lbs. of mercury. But was he really serious?

Yours truly,

S. PHILLIPS.

Horwich, January 31.

SIR,—In the case I mentioned the pipe was a 1-inch zinc pipe. A boiling hot solution of pearl ash would have been dangerous to the solder.

Yours truly,

HEDER.

A Chemical Ink.

SIR,—I have not only tried the stability of the ink for which I gave a form, but have also sold thousands of bottles of it, and have supplied our local boards with it for some years. I write with it now; and you, Mr. Editor, may judge of its value. Please put this under a water-tap for five minutes.

Yours truly,

ATRAMENT.

Pharmaceutical and Medical Opinions.

SIR,—In the report of the North British Branch of the Pharmaceutical Society Messrs. Nesbit and Hill are represented as having stated that they did not think hazeline an efficacious preparation. We are, of course, unable to say upon what these gentlemen base their opinion, but we can say that their statements are absolutely at variance with those of the most reliable therapeutists of this and other countries. We are always glad to have criticisms that may lead to pharmaceutical improvement, but to do this they should be more than mere notions. A too careful discrimination cannot certainly be made between what this and that one supposes, and opinions which are the logical outcome of scientific investigations. The only experiments we are aware of that have been undertaken to show that hamamelis dis-

tillate is worthless were those the absurd nature of which we had occasion to point out about a year ago. To ascertain clinically the value of a drug in certain cases of hæmorrhage is perhaps as free from the chances of error as almost anything in therapeutics, and the favourable reports given by physicians and dentists of the efficient hæmostatic action of hazeline in hæmorrhage where other drugs failed are numerous. The experiences of such eminent authorities as Ringer (*vide* his "Handbook of Therapeutics"). Lauder Brunton, Shoemaker (Philadelphia), Pollock (Glasgow), the president of the last International Medical Congress, and experiments in France and Spain, do not tally with the ideas of Messrs. Neshit and Hill, and until something more convincing against hazeline shall be adduced than hypotheses and suppositions, the observations and good results of leading therapeutists and clinicians, as well as general practitioners, with hazeline will command attention. We may say, in this connection, that never since we introduced hazeline has this preparation possessed so great activity as now.

Yours very respectfully,

February 1.

BURROUGHS, WELLCOME & Co.

Unscrupulous Use of the Telephone.

SIR,—In your last issue of January 23, Messrs. Lorimer & Co. allude to what would appear a glaring abuse of the telephone.

It will interest your readers to learn that we were the agents in this matter, and the facts were very considerably different to Messrs. Lorimer & Co.'s statement.

On December 7 last Messrs. L. & Co. ordered, after 'Change time, by telephone, 1,000 oz. quinine prompt, and 5,000 oz. up to March, at 2s. 1d. per oz., Zimmer's brand, which we made subject to our principals' (Messrs. Zimmer & Co.) acceptance by wire.

The next morning, on the 8th, after having received a wire message from Germany, we wired (not telephoned) to Messrs. Lorimer & Co. as follows:—"Zimmers decline 2s. 1d. Offer, per wire, 1,000 prompt, 2,000 January, 2s. 2d."

About an hour after this message had left Messrs. Lorimer & Co. called by telephone that they had received our wire message, but wanted to know the price of Johst's brand, to which they received the reply that it was the same price.

Some short time afterwards, during dinner-time, another telephonic message came from Messrs. Lorimer & Co., distinctly saying that they would take Zimmer's brand.

Later in the day, on 'Change, however, some quinine was offered by another firm at 2s. 1d., and when our written sale contract reached Messrs. Lorimer & Co. the next morning in the ordinary way, by post, it was sent back to us with the observation that Messrs. L. & Co. never thought it.

Telephonic messages being no proof in law, we could not force Messrs. L. & Co. to take the quinine; we therefore told them that this was a very unscrupulous use of the telephone, and our principals declined to let them have, at any future time, either Zimmer's or Johst's brand.

Respectfully,

A. & M. ZIMMERMANN.

Sole agents of the Vereinigte Fabriken Chemisch Pharmaceutischer Produkte Feuerhach—Stuttgart, Frankfurt; and M. Zimmer & Co., Frankfurt-on-Main.

Cross Lane, St. Mary-at-Hill, February 1.

Price of Quin. Sulphas.

SIR,—Is the retail price of this article a matter of conscience or of prudence? It has been a source of much annoyance to me. I have not bought since the price fell below 5s. per oz. It has not, as far as I am aware, been more largely used since it became very cheap. This fact, which may perhaps be owing to local climatic circumstances, I commend to Mr. Silas Mainville.

Yours truly,

HEDER.

Mineral-water Manufacturers and their Charges for Bottles.

SIR,—May I trespass on your valuable space to call the attention of the trade to the exorbitant charges made by the principal makers of aerated waters for their bottles. The

prices they obtain for their waters leave them a very hand some profit, without obtaining from their customers 100 per cent. profit on their bottles. It will no doubt be argued by these manufacturers, "What does it matter about the price we charge for bottles when we allow the same price when they are returned empty?" This is substantially correct, but then it is well known in the trade that in the course of twelve months there are a lot of bottles missing, and these may be reckoned among those sent out to private customers, who tell you, "We never pay for bottles. Mr. — never used to charge us for them, and you are sure to get them back." Sometimes you may, but frequently there are some short. Then, again, breakages by your own servants and bursts help to account for the deficiency. On all bottles not returned these makers get cent. per cent. profit.

I am in possession of two letters from large bottle manufacturers, whose quotations—numbered respectively 1 and 2—for 1,000 gross of each sort, which would be a small order for the few firms I have in view to give, delivered free in London, are as follows:—

	No. 1.	No. 2.
Egg-shaped sodas, same weight and description as used by the largest London makers	s. d. 12 6	s. d. 11 0
Cylinder-shaped bottles, 10 oz., as used by the leading Irish firms	12 0	11 0
Cylinder-shaped splits	11 0	9 6
Six dozen railway-cases charged by these makers at 6s. 6d. and 6s. cost them 5s. 6d. each.		

You will, therefore, see that bottles which are charged at 2s. per dozen by these makers cost them, respectively, 1s., 11d., and 9½d. per dozen, leaving them a very handsome, or secondary, profit on all bottles not returned.

I, am, sir, your obedient servant,

TENAX PROPOSITI. (41,243.)

Store Suppliers.

SIR,—We have read a great deal about "stores experience" in your excellent journal of late. It would be interesting to a great many of your readers if someone would supply a list of wholesale druggists, druggists' sundriesmen, &c., who supply these stores, and their terms (to the stores). There are wholesale houses that have existed for years on the profits obtained by trading with chemists, and who still exist by such trading, supplying the stores at prices from 10 to 25 per cent. less than they supply chemists at.

Yours truly,

February 1.

ONE WHO KNOWS. (257,33.)

DISPENSING NOTES.

[The opinions of practical readers are invited on subjects discussed under this heading.]

Creasote Pills.

SIR,—Having to make 3j. creasote into twelve pills, I made them with curd soap 10 grs., and p. glyerrh. to stiffen. This produced a satisfactory mass, but made the pills too large. Crumb of bread also makes a very large pill. Can you suggest any other method by which a smaller pill can be produced?

Yours truly,

H. D. D. (248/61.)

[The addition of 3 grains of tragacanth is beneficial, and increase the soap by half.]

Essential Oil in Mixture.

Ol. cajuputi	m℥i.
Aquam, ad	5vj.

Sign.: 3ss. ter. lie.

SIR,—What is the best way to dispense this—whether to solve oil in spt. and add water, or to emulsify with mucilage? I adopted the latter process.

MORTAR AND PESTLE.

[The latter course was the better one.]

The Illegible Prescription.

The following are amongst the renderings which have been received:—

SIR,—With reference to the illegible prescription on page 141 of *THE CHEMIST AND DRUGGIST*, I beg to submit the following as my rendering of it:—

Hab.
Extract. opii fluid. 3iv.
3ij. ad Oss. aquam once a day.

I am, sir, yours truly,
HILLS BROWN.

M. M. B. (250/22) thinks that the following is the correct thing:—

Hst. quin. aper.
M.
(mitte)
Alum 3iv.
3ij. ad Oss. aquam.
Pine Chirg

Still another mode of dispensing the prescription:—

Hst. senne aper.
Talis 3iv.
3ij. ad Oss. aquam.
Once a day.

Yours, &c.,
CHARLES WESTON.

Our Blackheath correspondent dispensed it as follows, but is open to correction:—

Haut. ferri aper.
Iis
Alum 3iv.
3ij. ad Oss. aqua.
Once a day.

Excipients Wanted.

247/5. *Phania* would like to know the best excipients for making up the following pills:—

	Gr.
(1) Codeinae	1
Ext. nucis vom.	$\frac{1}{4}$
„ cascara sag.	$\frac{1}{2}$
M. Ft. pil.	
(2) Antipyrin	gr. v.
Ft. pil.	

Ointment Queries.

SIR,—This ointment, after being made, either by heat or on a slab, is crumbly, and the lead oozes out in drops. Is there any way to prevent this, or is the ointment, as I suspect, too highly charged with liquid to present an elegant appearance?

Liq. plumbi diacetat. 3j.
Liq. carbonis deterg. 3iij.
Lanolin 3j.
Axungie 3j.

M. Ft. ungt.

H. C. (249/41.)

SIR,—How should the following prescription be prepared, and what should be the appearance of the product?—

Lin. potass. iodid. c. sapon., lanolin., of each .. 3j.
Ft. ung.

A satisfactory ointment was secured only after considerable trouble, the result being a smooth, light cream-coloured ointment. It was prepared previously by a Liverpool chemist as yellow as unguent. resin.

Abergele.

APPRENTICE. (250/32.)

Dispensing at Pau.

SIR,—Our letter, unfortunately, appears to have touched the susceptibilities of some of our brethren in Pau, and this we regret. Our object was not to enter into a controversy,

for which we have neither time nor inclination, but to elicit an opinion from some of your able and courteous correspondents as to the possibility, or otherwise, of producing a mixture such as we described (even by making “unimportant modifications”). We believe such “modifications” are permissible, at least to “respectable houses,” but the latitude of England and the Lower Pyrenees may vary somewhat. The homily of Mr. Jarvis on trade etiquette is quite foreign to the question, and equally so is his reference to the heading of our letter, for which we are not responsible.

Yours truly,

Boston, January 31.

GRIMBLE & KENT.

Saline Mixtures.

SIR,—I frequently dispense mixtures similar to the first one quoted by Mr. Ince in his paper read before the London Chemists' Assistants' Association last month, and should like to know *your* opinion as to the correct way of dispensing it. The one referred to was:—

Pot. bicarb.	..	..	..	..	3iss.
Acid. cit.	..	..	..	..	5j.
Ammon. carb.	..	..	..	..	3ij.
Tr. scillae	..	..	..	..	3ij.
Tr. camph. co.	..	..	..	..	ij.
Syr. tolut.	..	..	..	..	5iv.
Aq. ad	..	..	..	..	3vj.

I always try in dispensing to carry out the apparent wish of the prescriber, and, on inquiring of one, was told he wanted an extemporaneous mixture of citrates of ammonium and potassium made. One medical man writes his prescription thus:—

Potass. cit.	..	..	..	..	iv.
Liq. ammon. cit.	..	..	..	..	5iv.
Vin. ipecac.	..	..	..	..	℥xvj.
Sp. chlorof.	..	..	..	..	3i.
Mist. amygd. ad	..	..	..	..	3viij.

3j. 4tis hor.

Your explanation will oblige

UMBRA. (250/34.)

[We agree with Mr. Ince that when a diaphoretic mixture contains bicarbonate of potash and carbonate of ammonia with citric acid insufficient to neutralise both alkalies, the potash salt should by preference be neutralised. The reasons for this are that (1) potassium citrate is a diaphoretic; (2) carbonate of ammonia is valuable in bronchial affections; and (3) when there are no specific directions the dispenser should follow custom. The second example given by “Umbra” does not apply, because it is a mixture of fully-saturated citrates.]

249/54. *Alf.*—We have no doubt whatever that the ingredient of the prescription is spt. æth. nit., and not spt. ætheris.

LEGAL QUERIES.

55/250. *Fair Play*, referring to a reply given in this section last week, to the effect that medical men may keep open shop for the dispensing and vending of poisons, and may call themselves chemists and druggists if they please, writes as follows:—Surely you are under a misapprehension. The following answer to a correspondent in the *Lancet*, January 7, 1888, expresses my views thoroughly:—

Files.—No person who is a member of the medical profession, or who is practising under right of any degree from a university, or under any diploma or licence from a medical or surgical body, can be registered under the Pharmacy Acts. An apothecary cannot therefore practise legally as a chemist. On the other hand, nothing in the Pharmacy Acts affects the rights of apothecaries, including that of supplying medicines to patients.

The *Lancet* quotes first from the 11th section of the 1852 Pharmacy Act, which prevents a medical man from being registered as a pharmaceutical chemist; and, secondly, from the 16th section of the 1868 Act, which says that “nothing hereinbefore contained shall extend to, or interfere with, the business of any legally qualified apothecary.” So far the medical man is not authorised to call himself a chemist and druggist; it is no part of the business of an apothecary to so

designate himself, and therefore the saving clause quoted would not allow him to do so. Then the 23rd section of the 1868 Act said, "Persons registered under the Medical Act shall not be, or continue to be, registered under this Act." But this clause was repealed by section 4 of the Amending Act of 1869, so that there is nothing to prevent a medical man from getting registered as a chemist and druggist, though the clause in the 1852 Act preventing his registration as a pharmaceutical chemist is still in force. There are, in fact, medical men on the register of chemists and druggists. Finally, there is the first section of the 1869 Act, which says, "Nothing contained in the first fifteen sections of the recited [1868] Act shall affect any person who has been registered as a legally-qualified practitioner before the passing of this Act; and the said clauses shall not apply to any person who may hereafter be registered as a legally-qualified practitioner; and who, in order to obtain his diploma for such registration, shall have passed an examination in pharmacy." The legal luminary of the *Lancet* is wrong; he did not push his inquiries far enough.

65/250. *Cochineal* says:—"Perhaps it might interest some of your readers who are troubled *re* Dr. Gregory's Powder, to learn that the label as under has been declared not liable by the authorities:—



DR. GREGORY'S
STOMACHIC POWDER.

Prepared with

*Finest Turkey Rhubarb, Calcined Magnesia, and
Aroma of Jamaica Ginger.*

DOSE.—A tea-spoonful in a wineglassful of peppermint or spring water.

From W. T. T.

Address

This is interesting; as we understand, the Board will not interfere in the case of preparations, even with the possessive case in their titles, if these are named in the *Pharmacopœia*.

64/250. *Grateful* has also sent us a slip label, bearing simply the words "Gregory's Powder," with his name and address added, which he submitted to the Board, and which after a week's delay were returned to him marked "Not liable."

32/249. *Godiva*, whose total income from every source is less than 150*l.*, has been paying something like 30*s.* a year as income-tax on some rents from house property. He wants to know if he is liable to the tax, and if he can recover any of it, and how? He is not liable to it, and he can recover the payments of the last three years only (10th sec. 23 Vic. cap. 14). To get this money he must obtain a form of application from his local collector of income-tax, or, if he cannot give it, he will furnish the address of the surveyor of taxes for the district, who will supply it. The instructions on the form will explain what is next to be done.

25/145. *W. M.*—Chloric ether (sp. chloroform) and tinct. chloroformi co. are not chloroform, but preparations of it; and, though chloroform is named in the schedule, its "preparations" do not appear there, therefore we should suppose it is not illegal for an unqualified person to supply these. If chlorodyne lozenges could be proved to be a "preparation of morphia," which we suppose they are, this would bring them within the schedule, though we do not think that the existence of a trace of morphia in a compound makes that compound necessarily a "preparation of morphia"; to bring it to that legal position, morphia ought to be the active ingredient. Belladonna plasters are no doubt a preparation of belladonna, and as such cannot be legally sold by unregistered persons.

16/147. *R. P. J.* asks if he, not being a dentist, may advertise thus:—"Dentistry.—Mr. R. P. J., &c., supplies teeth upon the most approved principles. Price from 5*l.* 5*s.*" We think this does not infringe the law. It might be as well, however, to avoid the use of the word "Dentistry." The term "porous," as applied to plasters, is not registered and is not registrable. (See page 263 of *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1888.) That means you may use the word, but you may still infringe other people's rights if in any way you lead customers to believe that they are buying some one else's plasters.

29/249. *W. H. J.*—Grocers can legally sell salts of lemon. The question whether they may legally sell fly-papers is more difficult. If a court could be induced to regard them as "preparations of arsenic," grocers would not be justified in selling them; but then, on the same ground, chemists would only be able to sell them after entering the sale in a book, labelling them, and so forth.

50/250. *Medical*.—The pharmaceutical examiners do not recognise any other examination, or any part of any other examination, as a substitute for their Minor or for any part thereof.

7/251. *V. C. C.*—It seems as if you may have a ground of action against your predecessor, but much depends on circumstances which we cannot gather from your letter—as, for instance, whether the new balsam is put up in style similar to the old one. You had better consult a respectable solicitor, as you must do before proceeding at law. He will know what steps to take.

71/247. *C.*—A retailer's wine licence is required for the sale of Coleman's Wine, St. Raphael Wine, and Vin Mariani. Armbricht & Nelson's Coca Wine may be sold without a wine licence. In regard to any other coca wine you had better ask the Board of Inland Revenue, submitting a sample. The wine licence costs 50*s.* a year. It is obtained from the excise officer after the permission of your local magistrates has been obtained.

16/248. *J. B.*—We do not care to draw up business cards guaranteed to evade the law, but we may state that, while any one may treat animals medicinally, no one not on the register of veterinary surgeons may take or use the title of veterinary surgeon or veterinary practitioner, "or any name, title, addition, or description stating that he is a veterinary surgeon or a practitioner of veterinary surgery or of any branch thereof." We should think it prudent to avoid the use of the term "veterinary" altogether, and to say simply that the advertiser supplies medicines for horses, cattle, sheep, &c.

67/246. *E. C.*—We do not see that it is illegal to sell lavender-water containing methylated spirit. The purposes for which methylated spirit may not be used are for the preparation of a beverage, or of a medicine, or of any article capable of being used wholly or partially as such.

MISCELLANEOUS INQUIRIES.

89/6. *Old Man Kangaroo* (Queensland).—In a recent number of *The Chemist and Druggist of Australasia* you will find a description of a still suitable for rough distillation of eucalyptus oil, and in our *Diary* for 1887 you will find full descriptions and illustrations of steam apparatus for the same purpose.

247/45. *F. W. Hopkins*.—To Soften Quills.—Steep them in a solution of caustic soda, and to harden them again wash well with cold water, to which a little vinegar has been added. Dry in a warm place. This plan will suit for fishing-tackle purposes.

247/11. *Amerik*.—We again remind you that we do not reply to anonymous queries. When we receive your name and address we shall give a formula for the preparation which you send.

247/10. *Silver King*.—(1) Hair-oil Perfume (cheap):—

Oil of citronella	..	..	..	6 oz.
" verbena	..	..	..	1 "
" cassia	..	..	..	2 drachms
" cloves	..	..	..	2 "
" bergamot	..	..	..	4 "

Mix.

Can be retailed at 5s. a lb. to yield a fair profit.

(2) *Balsam of Sulphur* is made by boiling together until a sticky paste is formed 1 part of sulphur and 4 parts of olive oil.

250/13. *Cod-liver Oil Emulsions*.—*An Apprentice*.—Saccharated solution of lime is not a suitable agent for emulsifying cod-liver oil, because it forms a soap with the oil which might disagreeably affect patients.

249/25. *John*.—The illustrations given last week are all drawn to about the same scale, viz., 100-120. You will observe that No. 4 of last week, and No. 4 of December 10, are very different, the latter not being so uniform. The fat globules of milk vary in size in different samples of milk.

248/27. *Simplex*.—The therapeutic properties of *Fel Bovinum* have never been clearly established. Dr. Harley is one who has spoken most favourably of it for renal affections and complaints depending thereon. It is given on the supposition that if there is a deficiency of bile, *fel bovinum* will supply the deficiency. The dose is 5 grains, administered in the form of pill, or in a capsule of gelatine. The root of *Berberis aquifolium* contains berberin, and is used as an alterative and tonic for syphilis and various skin diseases. Its action is very similar to *Hydrastis canadensis* root.

246/36. *Didymus*.—*Linimentum Crinale* is the best preparation for making the hair grow on the head.

246/27. *Subscriber* (Liverpool).—*Lightning Paper*.—We presume that you mean by this tissue-paper which has been steeped in a solution of nitrate of potash or strontia, and dried.

248/58. *Plumpo*.—(1) The address of the Secretary of the Pharmaceutical Society is 17 Bloomsbury Square, London, W.C. (2) For recipes for hop bitters please consult last volume.

249/38. *C. B. & Co.*—We have never had any difficulty in producing an inseparable *Lin. Potass. Iodid. c. Sapone* by using curd soap and carefully following the official directions. The soap which we have found the best is the citronella scented kind, in 1-lb. 6d. bars.

Potassii Carbonas, B.P.—*Mortar and Pestle* puts the following question:—"A wholesale firm quote in their prices current—

Potass. carb.	..	..	..	..	6d. lb.
" "	pure	..	..	..	5s. lb.

Thinking the latter, being a pure article, would be especially suitable for preparing *Blaud's Pills* and the *B.P.* preparations into which potass. carb. enters, I ordered some, but find it is 'Pure anhydrous carbonate of potassium,' and therefore I suppose it is unsuitable, as the *B.P.* defines ' K_2CO_3 ' with about 16 per cent. of water of crystallisation."

[Although the Pharmacopoeia allows a little silica, chlorides, &c., in *Potassii carbonas* as impurity, there is no reason why "Mortar and Pestle" should not use the pure

carbonate after it has absorbed 16 per cent. of water. But this would be carrying elegant pharmacy to somewhat a high level.]

246/63. *Atramentum*.—(1) It is scarcely practicable to remove old and faded ink from paper by means of ordinary weak acids, because the writing is in the form of ferric oxide. (2) You will find various formulae for *Writing-ink* in last volume. The one which we now give is said to be the formula used by Duncan, Flockhart & Co. for their blue-black ink:—

Blue Aleppo galls (free from insect perforation)	..	..	..	4½ oz.
Bruised cloves	..	..	..	1 drachm
Cold water	..	..	..	40 oz.
Purified iron sulphate	..	..	..	1½ oz.
Pure sulphuric acid	..	..	..	35 minims
Sulphate of indigo (in the form of a thinish paste, which should be neutral or nearly so)	..	..	..	¼ oz.

Macerate the galls and cloves in the water for a fortnight, then press and strain through linen, add the iron sulphate (powdered), dissolve, add the acid and the indigo, shake well and after a week filter

247/26. *R. W. Thompson*.—*Lin. plumbi iodid. c. sapone* is obviously a *lapsus penne*.

247/42. *Cedar*.—(1) *Warner's Safe Cure*.—We do not have a formula for this preparation. According to the Local Board of Health of Karlsruhe, it is composed of liverwort, saltpetre, glycerine, and alcohol, flavoured with oil of wintergreen. (2) *St. Jacobs Oil*.—(See our issue of December 10, page 725). (3) We do not know the composition of *Fennig's powders*. (4) *Silvering Solution*.—What hawkers sell is an acid solution of nitrate of mercury. The following is a reliable preparation:—

Dissolve 1 oz. fine silver in dilute nitric acid (1 in 3); evaporate and crystallise; dissolve in 3 pints of water; add a solution of 2 oz. potassium iodide in ½ pint of water by degrees, until no fresh precipitate appears on the addition of a fresh drop of iodide; wash the precipitate repeatedly, and dissolve it in a strong solution of potassium cyanide in hot water, added gradually with stirring. When nearly all the iodide is dissolved allow the vessel to stand at rest for a few hours, pour off the clear solution and treat the undissolved iodide with fresh cyanide solution, taking care to avoid excess of the latter. Make up the solution to 1 gallon by adding water, and leave it for a few days before working. Chains, lockets, and similar small articles should be thoroughly cleansed before immersion in a bath of this solution. To do this immerse in succession in alkali, water dilute acid and water; then place in a perforated ladle of stoneware or porcelain, or suspend on copper hooks attached to a battery.

247/49. *J. P.*—There is no satisfactory substitute for gum acacia for the tough jujubes; by increasing the quantities of gelatine and dextrin you can get the nearest resemblance to pure gum goods.

247/50. *B. G.*—The *Cough Mixture* which you send contains syrup of tolu, syrup of squills, sweet spirit of nitre, and tr. pruni virg. Try the following formula:—

Tinct. pruni virg.	..	..	..	3ij.
Spt. aether. nit.	..	..	..	3vj.
Syr. toluatan.	..	..	..	3ij.
Syr. scillae	..	..	..	3iij.

Mix.

244/80. *Orum*.—We do not know the substance which you send.

32/246. *Alpha* wants information "how to remove glass tablets from windows." We trust he will not find it too much trouble to refer to the last two or three numbers, in which letters on this subject have appeared. His request for the name and address of a correspondent who has written to us in confidence cannot of course be complied with.

Chiswick Soap Co.

CHISWICK, LONDON.

SPECIALITIES.

"Imperial" Brand,

In Tins for Domestic Use,
1, 2, 3, 3½, 4, & 7 lbs. each, net.
Also Firkins and Half-Firkins.

Sanitary Soft Soap,

containing 10% Carbolic Acid,
in all size Tins and Firkins.



Manufacturers of every
description of **SOFT SOAP**,
for Home and Export.

"BBB" and "BB" qualities,
for ordinary Scouring Pur-
poses, making Sheep Dip, &c.
Strongly recommended as firm,
pale, transparent, genuine
Soaps.

Price Lists and Samples free by
post upon application.

Soft Soap.

SOLE IMPORTERS

OF

APOLLINARIS WATER,

FRIEDRICHSHALL WATER,

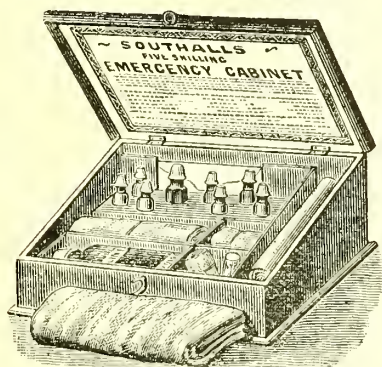
HUNYADI JÁNOS WATER,

THE APOLLINARIS CO., LIM.,

19 REGENT STREET, LONDON, S. W.

SPECIAL PRICES NO APPLICATION.

ACCIDENT CASES FOR DOMESTIC USE, 1/ AND 5/ EACH.

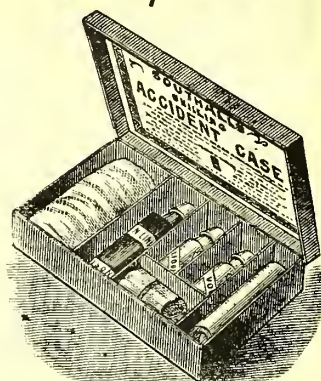


SOUTHALL'S
SHILLING ACCIDENT CASE
Contains Burn Liniment, Styptic Colloid, Sal Volatile, Adhesive Strapping, Gauze Tissue (for making Pads), Bandage, Camel-Hair Pencils, &c. The whole, in a cardboard box, with directions for the treatment of Wounds, Burns, Blisters, Insect Bites, Faintness, &c.

Wholesale Price, 9/6 per dozen, less 5 per cent.

SOUTHALL'S
FIVE SHILLING HOUSEHOLD EMERGENCY CABINET.
This set is much larger and more complete. The whole in a neat box with hinged lid.
Retail, 5/; Wholesale, 43/ per dozen. Descriptive Circular free on application.

SOUTHALL BROS. & BARCLAY,
Manufacturing Analytical & Wholesale Chemists,
MANUFACTURERS OF THE 'A1' COD LIVER OIL,
BIRMINGHAM.



DINNEFORD'S FLUID MAGNESIA



PERFECT IN PURITY AND UNIFORM IN STRENGTH.

The most efficacious antacid and mild aperient for Delicate Constitutions.
Ladies, Children, and Infants.

OF ALL WHOLESALE DRUGGISTS.

METHYLENE.
Obtained by the action of Metallic Zinc on Chloroform and Alcohol.
Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.
1-lb. Bottles, 16s.; 6-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.
COMPOUND ANÆSTHETIC ETHER.
For producing Local Anæsthesia.
In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.
OZONIC ETHER.
In 2-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s. and 12s.
PEROXIDE OF HYDROGEN.
First introduced as a medicine by Dr. RICHARDS
ETHYLATE OF SODIUM
(Dr. RICHARDSON'S Formula) for removing Nævi, &c. In 4-oz. & 1-0 Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. &
STYPTIC COLLOID,
or promoting the Healing of Wounds by the first Intention
In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 13s.
CHARCOAL CAPSULES,
Containing Pure Vegetable Ivory Charcoal.
In Boxes, 2s. 6d. each.

147 OXFORD ST.

1 ROBBINS & CO.

Savaresse's Capsules.

SAVARS CUBEB CIGARETTES.

SAVARS CUBEB CIGARETTES.

SAVARESSE'S CAPSULES. SANDAL WOOD; COPAIBA.

Cubeb, Stramonium, and Cannabis Ind. (soothing). Relief in Asthma, Throat Cough, Bronchitis, Influenza. A specific against Fogs.

Boxes (12) 1s., 9s. per doz.; (36) 2s. 6d., 24s. per doz.

Full Directions.
EVANS, SONS & CO.,
LIVERPOOL.
EVANS, LESCHER & WEBB,
LONDON.

Savaresse's Capsules of membrane, each containing 15 drops Pure Maranham Copaiba Balsam, or, also of membrane, each containing 10 drops Purest Yellow Sandal Wood Oil. The efficacy of these valuable medicines is due to the absolute purity of the Balsam or Oil, and to the very gradual solubility of the membrane as compared with gelatine.

Copaiba, 2s. 6d., 18s. doz. Sandal, 4s. 6d., 36s. doz.
EVANS, LESCHER & WEBB,
LONDON.
EVANS, SONS & CO.,
LIVERPOOL.

ALMILAJ.

The REMEDY by SPECIALITY. PREVENTIVE and CURATIVE.

For Cholera, Diarrhoea, Dysentery, Dyspepsia, Gastralgia, Colic, & all Catarrhal Affections of the Bowels. For Coughs, Colds, Influenza, Bronchitis, Asthma, & all Catarrhal Affections of the Lungs. For Hay Fever, Intermittent Fever, Ague, Neuralgia, & all ailments caused by adverse weather influences.

ALMILAJ is a concentrated medicinal preparation, composed of a specially-designed combination of vegetable products of long-tested and fully-established curative efficacy in the class of diseases above enumerated, and has been largely used in India with the most successful results. This preparation, as well as the name it bears, is the invention of Surgeon-General H. W. BELLEW, C.S.I. (Bengal Army (retired), lately, for ten years, Sanitary Commissioner for the Punjab Province; Author of "The History of Cholera in India from 1862 to 1881," and of "A Practical Treatise on the Nature, Causes, and Treatment of Cholera" (TATBURN & CO. London), &c., and has been specially designed as a Preventive and Curative Remedy in the class of diseases indicated, with the object of supplying a convenient and ready means of treatment, available for immediate use on the spur of emergency. For it is a well-known fact that the prompt and timely treatment of such diseases on the very first appearance of their symptoms—particularly in times of their epidemic prevalence—commonly suffices to check their progress altogether, especially when the action of medicine is aided by proper self-care and attention to clothing and diet, as is fully explained in the Practical Treatise on Cholera above mentioned.

For the purposes of the object stated, ALMILAJ is prepared in a concentrated liquid form, suitable for administration to sufferers of all ages, in small doses apportioned to age and strength without the necessity of any admixture whatever. The doses range from a drop or two for Infants, to forty drops, the full dose for an Adult. The Medicine is prepared with special provision to ensure the preservation of its composition and therapeutic properties for an indefinitely long period under ordinary care, and is put up in flat one-ounce actinic green bottles, for convenience of portability about the person when travelling or away from home, &c. For facility of measuring the larger doses, each bottle is graduated in twelve parts, each part containing the full dose for an Adult.

Price 2s. 9d. per Bottle. Observe the word ALMILAJ is printed on the Government Stamp.

Sold by Chemists and Druggists everywhere, and Wholesale by Messrs. BURGOYNE & CO., 16 Coleman Street, London, E.C.
And by the Sole Manufacturer, L. MERCS, 159 EUSTON ROAD, LONDON, N.W.

Silver Medal at Inventions Exhibition 1885.

Established
1798



Howards & Sons

FLUID EXTRACT OF CINCHONA,

made from C. Califaya, or C. Succirubra, containing the whole alkaloidal contents of the bark.

QUININE, CINCHONA ALKALOIDS,

Acids, pure.	Citrate of Iron & Quinine, P.B.
Æthers, pure & methylated.	Citric Acid & Citrates.
Antimony preparations.	Corrosive Sublimate.
Benzoic Acid & Benzoates.	Iodides of the Alkalies.
Bicarbonate of Soda (Howards').	Iodoform.
Bismuth preparations.	Magnesia.
Borax & Boracic Acid.	Mercurials, Calomel, &c., &c.
Bromides of the Alkalies.	Rochelle Salt & Pulv. Seidlitz.
Camphor Bells, Blocks, & Flowers.	Spirit preparations.
Cocaine Hydrochlorate.	Urethane & Hypnone.

AND OTHER PHARMACEUTICAL CHEMICALS.

Stratford, Essex.



Detailed Price Lists on application.

ALOIN,

THE ACTIVE PRINCIPLE OF ALOES,

MANUFACTURED BY THE DISCOVERERS—

T. & H. SMITH & CO., EDINBURGH AND LONDON.

"The uniformity in strength of Aloin, the smallness of its dose, and the certainty of its action, should commend it to the favourable consideration of all medical practitioners."—*Vide* Dr. Wm. Craig's investigations respecting our Aloin, published in the *Edinburgh Medical Journal* for May 1875.

Edinburgh Address—21 Duke St. London Address—12 Worship St., E.C.

New York Office—20 Cedar Street: FRA^s. JA^s. MACNAUGHTAN, Agent. [3]

STEINIGER & CO.,
DRUG & SPICE

MERCHANTS.

MINCING LANE, LONDON, E.C.,

And 52 VIRGINIA STREET, GLASGOW.

SPECIALTIES:

DALMATIAN INSECT POWDER.

English ground, from closed Flowers, pure & powerful.

GLYCERINE.

1.260 DOUBLE DISTILLED, PURE.

TELEGRAPHIC ADDRESS—"DRUGSTERS LONDON"

PELLETIER'S QUININE.

Sulfate de Quinine des trois Cachets,
Pelletier, Delondre et Levailant.

SOLE AGENT—

CHAS. BRUMLEU,

7 Mincing Lane, LONDON, E.C.

TOWLE'S CHLORODYNE

REVISED PRICE LIST.

	Retail.	d.	s.	Per Doz.
	d.	s.	d.	£ s. d.
Towle's Chlorodyne
Ditto
Ditto (3 fluid oz.)
Ditto (8 ")
Liq. Chlorodyn (Original and only Genuine Preparation.)
Ditto	ditto	...	...	...
Ditto	ditto	...	...	...
Winchester Quarts (6 lb.) 7/6 per lb., bottles free.
Towle's Antibilious Pills
Ditto
Towle's Chlorodyne Lozenges
Ditto Jujubes
Ditto in bulk, bottles free, containing 1 lb., 2/9 each.
Ditto ditto 1 lb. 10oz. 4/6 "
Ditto ditto 4 lb., 10/ "
N.B.—The Commissioners of Inland Revenue in requiring the Proprietors to stamp these Lozenges and Jujubes, before sending them out, will allow them to be sold by the retailers without further duty, providing they are simply wrapped in paper, and not enclosed in a box, bottle, or packet.
Thornton's Celebrated Toilet Cream
Ditto
Ditto
Amboline (Registered Trade Mark)
The Thornton (Red) Lotion (Stamp'd)
Paragon Hair Wash
Ditto

POSTERS, BILLS, AND SHOWCARDS ON APPLICATION.

£25 worth (assorted or otherwise) Carriage Paid.
7 lb. Lozenges and upwards stamped with Chemists' own name,
free of charge.

A. P. TOWLE & SON,

75 BACK PICCADILLY,

MANCHESTER, December 1886.

**OBTAINED OF ALL PATENT MEDICINE AND WHOLESALE
DRUG HOUSES**

BLOOD MIXTURE

J. BEEDZLER & CO.'S LONDON

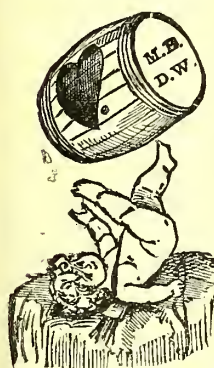
The OLDEST and GENUINE.
ONE HUNDRED YEARS' REPUTATION.

J. BEEDZLER & CO.'S LONDON

Small size, 1/1½; 3 dozen for 24/-

Large size, 2, 9; 1 dozen for 20/-

The Mormon Elder's



DAMIANA WAFERS

THE MOST POWERFUL
INVIGORANT
EVER PRODUCED.

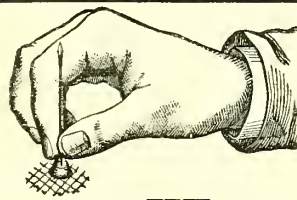
Permanently restores those weakened by early indiscretions, imparts youthful vigor, restores vitality, strengthens and invigorates the BRAIN AND NERVES. A positive cure for IMPOTENCY and Nervous Debility. *Prompt, Safe, and Sure.* 4/6 per box, 6 for 22/6. Usual discount to the Trade. Send for Circular.

F. B. CROUCH,

New York Address, 202 Grand Street.
London Depot, 90 Chiswell St., E.C.

Hovenden & Son, Sanger & Son, Barclay & Sons,
Edwards & Son, and all Wholesale Druggists.

Trade Mark.



Registered.

THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
12 PALL MALL EAST, LONDON, S.W.
SOLE AGENTS FOR DR. WARLWORTH'S GALT VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 6s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged Points, 1s. each; Pin-points, 1s. 1d. each. Eighteen Charged Small Points, 6s. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, 4s. per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccinations daily, between the hours of 12 and 2, by the Consulting Physician, at the uniform fee of a guinea. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to

EDWARD DARKE, Secretary.

Office hours, 10 to 4 Saturdays, 10 to 2.

JUST PUBLISHED.

J. SANGER & SONS' ADDENDA TO PRICE CURRENT

With over 300 Illustrations. It will be found to be a most Comprehensive List of

PROPRIETARY MEDICINES, DRUGGISTS' SUNDRIES,

PERFUMERY, LOZENGES,
MINERAL WATERS, &c.

AND WILL COMPARE FAVOURABLY WITH
ANY OTHER LIST AS TO
PRICES CHARGED.

POST FREE ON RECEIPT
OF BUSINESS CARD.



Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other houses.

AGENCIES OF ALL KINDS UNDERTAKEN
ON FAVOURABLE TERMS.

J. SANGER & SONS, 489 OXFORD STREET, LONDON, W.

KEARSLEY'S Widow Welch's FEMALE PILLS.

These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.

CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1793. The Genuine Recipe for Widow Welch's Female Pills has been prepared by them for 100 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

Price 27s. per Dozen, subject to usual Discount. Special Quotations to Shippers and for large quantities on application to

J. SANGER & SONS, 489 OXFORD STREET, LONDON, W.


THE HOP BITTERS COMPANY

(LIMITED)

Have introduced a 2/6 size Bottle,
which is in great demand.
Send to your Wholesale Dealer for
price, and put in Stock.

RETAIL PRICES in FUTURE,
2s. 6d. & 4s. 6d.

CAPSULED

“McK. & R.”  PILLS.
Q U I N I N E.

McK. & R.	DOZ. BOTTLES.		PILLS.	DOZ. BOTTLES.	
	containing 25 Pills.	containing 100 Pills.		containing 25 Pills.	containing 100 Pills.
Quinine, Bi-Sulphate	.. 1 gr. 5/-	16/-	Quinine, Sulphate	.. 1 gr. 5/-	16/-
“ “	.. 1 gr. 5/-	16/-	“ “	.. 1 gr. 5/-	16/-
“ “	.. 1 gr. 5/-	15/-	“ “	.. 1 gr. 5/6	18/-
“ “	.. 2 gr. 7/6	25/-	“ “	.. 2 gr. 8/-	28/-
“ “	.. 3 gr. 10/6	38/-	“ “	.. 3 gr. 11/-	40/-
“ “	.. 4 gr. 13/-	48/-	“ “	.. 4 gr. 14/-	52/-
“ “	.. 5 gr. 16/-	60/-	“ “	.. 5 gr. 17/-	64/-

OV oid CAPSULED PILLS

(Of the British Pharmacopœia and other Standard Authorities).

Originated, 1870, by McKESSON & ROBBINS, New York, U.S.A.

London Agency: Messrs. S. MAW, SON & THOMPSON, 7 to 12 Aldersgate Street, E.C.

AND CAN BE HAD ALSO OF

Messrs. BURROUGHS, WELLCOME & CO., Snow Hill Buildings, London, E.C.; Messrs. HOCKIN, WILSON & CO., 38 Duke Street, Manchester Square, London, W., and the principal Wholesale Houses in the Trade throughout Great Britain and Ireland.

TERMS TO THE TRADE AND REVISED LIST OF FORMULAS MAILED FREE ON APPLICATION
Private Formulas of 3,000 or more Pills made and capsuled to order for Hospitals and large consumers at special quotations.

Address: S. MAW, SON & THOMPSON, 7 to 12 Aldersgate St., London (the London Agency).

Send for a Trial $\frac{1}{2}$ -dozen Bottles.

EUCALINUM ANTISEPTIC TOILET VINEGAR.

RETAIL PRICE 2s. PER BOTTLE.

We will forward to any Chemist in U. K. or Colonies with every order sent *direct to us*, but to be passed to their a/c at Wholesale Patent Medicine Houses, double the number of sample bottles to the quantity ordered for free distribution.

For Bath and all Toilet Purposes. Specially adapted for Ladies' Use.

ROCKE, TOMPSITT & CO., CHEMISTS,
MELBOURNE AND LONDON.

SOLE AGENTS:

C. GREEN & CO., Tower Chambers, Moorgate St., E.C.

EVANS'

COATED PILLS

Pearl coated, readily soluble, prepared in our own laboratory, with best drugs only, such as are used in all Evans' Pharmaceutical Preparations.

Full list and prices, see Drug List.

EVANS'

INSECT POWDER

Imported and freshly ground at their own mills from *Closed Flowers*.

In bulk, or in 6 $\frac{1}{2}$ and 1s. tins, with perforated rotary top, or in Enamelled Metal Boxes (Savars).

For prices, &c., see Drug List.

EVANS, LESCHER & WEBB,
60 Bartholomew Close,
LONDON.

EVANS, SONS & CO.,
56 Hanover Street,
LIVERPOOL.

CANADA—

EVANS, SONS & MASON (Lim.), Montreal & Toronto.

AGENTS:

JAMIESON & CO., Produce Exchange, Sussex St., Sydney.

WYLEYS' GELATINE COATED OVAL PILLS.

The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List on application.

	Gross Botts.		Gross Botts.		Gross Botts.
Bismuth.		Ferri Hypophosph. Comp.		Phosphorus, $\frac{1}{30}$	
Pepsin.		(Wyleys'). Each pill represents		Ext. Nuc.	
Co.		1 fluid drachm of Syrup of the		Vom., $\frac{1}{4}$ gr. ...	2/-
(Wyleys'), B. Bismuth, Nit., 2		Hypophosphites... ..	2/6	Podophyllin Resin, $\frac{1}{3}$ gr.; Pil.	
gr.; Pepsin Porci, 1 gr.; Ferr.		Ferri Quininæ et Strych-		Rhei Co., 4 gr. ...	2/6
Redact., 1 gr.; Strychnin, $\frac{1}{24}$ gr.	3/6	ninæ Phosph. (Wyleys'), re-		Potass. Permang., 1 gr., 2 gr.	2/-
Calcii Sulphid. $\frac{1}{16}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1 gr.	1/8	presenting Easton's Syrup ...	3/-	Tie Douleureux	
Cascara Sagrada (Ext.), 2 gr.	2/-	Hydrarg. et Arsenic. Iodid.		B. Ferri Redact., 2 gr.; Chino-	
Ergotin. Comp.		(Wyleys'). Each pill equivalent to 5 minims of Donovan's		quinæ 1 gr.; Ext. Colchici Acet.,	
B. Ergotin, 1 gr.; Ferri Sulph.		Solution	1/8	1 gr.; Ext. Belladon., $\frac{1}{4}$ gr. ...	3/-
Exsic., 1 gr.; Ext. Hellebor.,					
1 gr.; Ol. Sabinæ $\frac{1}{2}$ m.; Ext.					
Aloes Soc., 1 gr.... ..	3/-				

WYLEYS & CO., COVENTRY.

LONDON ADDRESS—1a BURY STREET, ST. MARY AXE, E.C.

C. R. HARKER, STAGG & MORGAN

WHOLESALE & EXPORT DRUGGISTS

MANUFACTURING CHEMISTS

DISTILLERS & IMPORTERS of ESSENTIAL OILS

STANDARDIZED AND GUARANTEED DRUGS AND PREPARATIONS FOR HOME AND EXPORT TRADE.

TEMPORARY PREMISES—

72 and 74 GOLDEN LANE, BARBICAN, LONDON, E.C.

REGISTERED ADDRESS FOR TELEGRAMS—"EDULCINE LONDON."





BY SPECIAL
APPOINTMENT.

SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES

(WITH BEETROOT).



BY SPECIAL
APPOINTMENT.

DOG MEDICINES for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

"COMMON SENSE OF DOG DOCTORING," price 6d.

DOG SOAP.

LOCURIUM. Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs, Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast. Small Pamphlets on Canine Diseases supplied free for distribution.

WHOLESALE TERMS OF **SPRATTS PATENT LIMITED, LONDON, S.E.,** OR YOUR WHOLESALE HOUSE.

FOUND DEAD

BY SANFORD'S RAT POISON.

"I have found 145 rats killed in my farm buildings by it," L. C. Wilson Offord.
"It is the most certain remedy I have ever tried. Little pellets about the size of a pea are put in the rat holes or in their runs. I destroyed over 200 rats from one dressing with it." C. Cook, Grange Farm, Ellesmere, Salop. It is, without doubt, the best ever introduced. Price 6d., 1s., 2s., and 3s., of Chemists.

SANFORD'S MICE POISON for Houses, Buildings, Corn Stacks, &c. Cannot be excelled. Has given entire satisfaction for the past 24 years. In packets 3d., 8d., 1s., and 2s. each, with directions for use, of SANFORD & SON, Sandy, Beds. Liberal terms to Chemists. Wholesale of Barclay & Son, Sanger & Son, Newbery & Sons, Edwards, and others, London (England).

OIL PEPPERMINT, SPERMACEI, SARSAPARILLA, AND OTHER AMERICAN PRODUCTS,
OFFERED BY
STALLMAN & FULTON,
IMPORTERS AND EXPORTERS, NEW YORK.

SENECA ROOT, SERPENTARIA ROOT, BALSAMS.

GOLD MEDAL, EDINBURGH, 1886.

SEALING WAX.

(LION BRAND.)

DISPENSING, PARCEL, POSTAL, & BOTTLING WAX
OF EVERY DESCRIPTION.

This article could be profitably dealt in by Chemists and Druggists.

Show Cases filled with Stock, from 12/6.

Special facilities and terms to Wholesale and Export Houses.

GEORGE STEWART & CO., SEALING WAX MANUFACTURERS
Edinburgh; and 3 Dyer's Buildings, Holborn, LONDON.

Established
nearly 50 years.

DAY & SONS

WORLD-FAMED

Awarded
26 Prize Medals

HORSE, CATTLE & SHEEP MEDICINES.

DAY & SONS'

FOR Healing Wounds in all Animals.
FOR Sore Shoulders & Cracked Heels in Horses.
FOR Sore Teats and Swollen Udders in Cows.
FOR Anointing in Bad Lambing and Calving.
FOR Every Horsekeeper, Farmer, & Shepherd.

Purified DRIFFIELD OILS

PRICE

2/6

Per

Bottle

DAY & SONS'

FOR Fret Colic or Gripes in Horses.
FOR Debility and Shivering Fits in Horses.
FOR Hoven or Blown Cattle and Sheep.
FOR Scour or Flux in Calves and Lambs.
FOR Chills, Debility & Colic in all Animals.

BLACK DRINK

10/-

PER

HALF

DOZ.

19/-

PER

DOZ.

DAY & SONS' "WHITE OILS," for all External Injuries where the skin is not broken, such as Weak or Swollen Joints, Strains or Sprains, Spavins, Callous or Splints, Bruises of every description in Horses, Cows, Oxen, Sheep, Lambs, and Calves. Price 2/6 per Bottle; 6 Bottles in a Box, 15/.

DAY & SONS' "HUSK DRAUGHT," for Husk or Hoose in Cattle, Calves and Sheep. Price 20/ per dozen.

DAY & SONS'

FOR Bad Cleansing after Calving.
FOR Preventing Milk Fever.
FOR Purifying the Milk.
FOR Fevers, Yellows, Indigestion.
FOR Red Water, Costiveness and Dulness.

RED DRINK

PRICE

12/-

Per

DOZ.

DAY & SONS' ALTERNATIVE POWDER FOR HORSES.—Un-equalled for Coughs, Colds, Sore Throat, Thick Wind, Loss of Appetite, Sluggishness, Thick Water, &c. Price 3/6 per dozen, in Canisters containing 1, 2, 4, and 6 dozens.

DAY & SONS' "AROMATIC CHALK MIXTURE," an excellent Stomachic and aid to the "Black Drink," in cases of Scour in Cattle, Calves, Sheep, and Lambs. Price 2/6 per Canister.

THESE AND OTHER WORLD-FAMED MEDICINES ARE CONTAINED IN
THE "ORIGINAL" UNIVERSAL MEDICINE CHESTS

No. 13, Price £2 4s. and No. 11, Price £5,
FOR ALL DISORDERS OF HORSES, CATTLE, CALVES, SHEEP, AND LAMBS.

THE "HORSEKEEPER'S" MEDICINE CHESTS, price £2 14s. and £5, are specially arranged for Horses, and contain all that is required to keep them free from disease, and in fine, healthy condition.

All goods carriage paid. Beware of strange imitations, and note Name and ONLY ADDRESS—

DAY & SONS, CREWE, CHESHIRE.

WHOLESALE AGENTS—

Messrs. Barclay & Sons; Burgoyne, Burbidges & Co.; Evans, Lescher & Webb; Sanger & Sons, &c., London. Messrs. Evans, Sons & Co., Liverpool, &c.

The Most Extensive Peppermint Works in the World. Estab. A.D. 1869. Expositions Internationales Grand Prize Medals.

A. M. TODD, GROWER, DISTILLER, and REFINER of CRYSTAL WHITE OIL TRUE PEPPERMINT

Double Distilled, Distilled and Refined by Steam.

This quality is now offered through the leading Wholesalers of Great Britain at Special Introductory Prices, in sealed and guaranteed Bottles of 500 grams, 1 lb., 8 oz., and 4 oz., and 20 lb. Tins.

The Manufacturer **POSITIVELY GUARANTEES** it not only **ABSOLUTELY PURE** and **IN EVERY RESPECT THE HIGHEST QUALITY MANUFACTURED**, but also the **MOST PROFITABLE** in use—less being required, whilst the highest possible result are uniformly and quickly obtained.

PLEASE SPECIFY "A M TODD'S CRYSTAL WHITE" IN YOUR NEXT ORDER.

Notice its unequalled purity, strength, aroma, solubility, and entire perfection of manufacture. The benefit derived from your trial will be reciprocal and permanent. SEE LARGER ADVERTISEMENT IN NEXT ISSUE.

SPECIAL AGENTS—Burgoyne, Burbidges & Co., London; James Woolly, Sons & Co., Manchester.

INDIA.

APPLEBY & HALSE

Pharmaceutical Chemists,

General Merchants, House and Commission Agents,

Manufacturers of Mineral and Aërated Waters,

AUCTIONEERS AND CONTRACTORS.

BAREILLY, and NAINI TAL.

ROHILKHUND,

HIMALAYAS,

INDIA.

RIVER PLATE, SOUTH AMERICA.

Centro de Alimentos Digestivos, Productos Farmacéuticos, &c.
Calle de Cuyo 465, 467, & 469, BUENOS AYRES.

CARLOS J. CHRISTIE & CIA.

General Commission Agents,

Specially dedicated to the introduction of **Pharmaceutical Preparations, Surgical Aids and Appliances, &c.**, in the propagation and sale of which they possess special facilities, owing to their extensive connection amongst the buyers, and the fact of their being personally acquainted with the great majority of the Medical Profession of this and the adjoining Republics, whom they canvass periodically.

Correspondence, which will receive prompt attention, solicited.

Address: Messrs. **CARLOS J. CHRISTIE & CIA.**

Apartado de Correos, P. O. Box No. 918,

BUENOS AYRES, RIVER PLATE.

HORSE, CATTLE, AND SHEEP MEDICINES.

BY ROYAL APPOINTMENT.



By Special Warrant,
Dated 27th December, 1865.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant,
Dated 10th February, 1866.

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

Containing the following Matchless Remedies for all Disorders in Horses, Cattle, Calves, Sheep, & Lambs:

THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains, bruises, and swellings in horses; for pain after calving and lambing, and for swollen udders and sore feet. ½-dozen box, 7s. 6d.

THE RED DRENCH.

Celebrated for inflammatory disorders; such as fevers, pleurisy, foot-and-mouth complaint, yellows, surfeit, and red water. Also for difficult living and lambing. 3s. 6d. per doz. for Ewes; 15s. per doz. for Cows.

THE GASEOUS FLUID.

Unmatched for colic or gripes and debility in horses, for colds, chills, livering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

THE CARMINATIVE CHALK.

A warm stomachic in severe diarrhoea or flux, by way of change of the gaseous fluid in great irritation of the bowels. ½-dozen box, 10s.

Price of Chests, with "Guide to Farriery"—No. 1, £6/6/0; No. 2, £2/16/6; No. 4, £2/17/6 (for horses only). Carriage paid.

Prepared only by **DAY, SON & HEWITT, 22 DORSET STREET, LONDON, W.**, and sold by all Wholesale Houses in London; Rocks, Tompsett & Co., Melbourne; Felton, Grimwade & Co., Melbourne; Kempthorne, Prosser & Co., Lincoln & Anckland; Langford & McCutcheon, Druggists, Auckland; Fairthorne & Co., Launceston; Berkeley, Taylor & Co., Brisbane; Dombain & Co., Christchurch; Jeneure & Co., Jamaica; Neild & Co., Buenos Ayres; Willett & Co., Port Elizabeth; &c.

A LIBERAL DISCOUNT TO EXPORTERS, AND ALL PARTICULARS ON APPLICATION.

THE RED PASTE BALLS AND RED POWDERS.

Invaluable for ill-conditioned horses and after hard hunting and driving. For coughs, colds, staring coat, itching, swollen legs, and want of strength. The Powder is to be given in the feed. 7s. 6d. per dozen.

THE BLACK PHYSIC BALLS.

Excellent for confined bowels and for worms in horses, but a bran mash should be first given. In bad cases of worms give a dose of Broncholine after the Ball. For cows and oxen, for stoppage of the bowels, give a dissolved Ball. 8s. per dozen.

THE BRONCHOLINE

Invaluable for husk, hoarse, or cough in cattle, calves, and sheep; for tapeworms, and worms in horses. ½-dozen box, 7s. 6d.

THE GASEODYNE.

Used as landanum in uncontrollable spasmodic pains in ewes lambing and perfectly safe. ½-dozen box, 10s. 6d.

THE ALCOHOLIC ETHER.

Used as sweet spirits of nitre in severe colds and shivering fits. ½-dozen box, 7s. 6d.

HOMŒOPATHIC MEDICINES

Supplied direct or through the PATENT MEDICINE HOUSES.

SMALL QUANTITIES ARE CONVENIENTLY SENT BY PARCEL POST.

For Illustrated Guide and Prices apply to

JAMES EPPS & CO., Homœopathic Chemists
(FIRST ESTABLISHED),
48 THREADNEEDLE STREET, LONDON.

PUMILINE. THE ONLY PURE ESSENCE AND
EXTRACT OF SNOW-GROWN
PUMILIO PINES.

FOR GOUT, RHEUMATISM, SORE THROAT, CHEST AFFECTIONS.

Sir MORELL MACKENZIE wrote, December 9, 1887:—"I have much pleasure in stating that I have made use of Oleum Pumilionis during the last twenty-five years that I consider it a most valuable preparation. It acts as an admirable tonic to the mucous membrane of the air passages in cases of chronic bronchitis and laryngeal catarrh. I am glad, therefore, to hear that the remedy is about to be used on a large scale, and I have no doubt the results will be highly satisfactory." (Signed) "MORELL MACKENZIE, M.D."

PUMILINE ALONE, with the single exception of Pinol, possesses the physical and chemical properties which give it the faculty of being administered internally with SAFETY. It is, therefore, essential for Chemists to use Pumiline, as it is the only preparation obtained from snow-grown Pumilio Pines.

FOR TRADE PRICE LISTS, PAMPHLETS, ANALYTICAL REPORTS, &c.—

G. & G. STERN, 11 Billiter Square, LONDON, E.C.

M. A. CRAVEN & SON,
WHOLESALE AND EXPORT CONFECTIONERS,
MAKERS OF
Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery,
IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.
EBOR CONFECTIONERY WORKS.
YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients), and stamped with any name or device.

SPECIALITIES—Cough, Peppermint, Rose, Musk, Bouquet, Cachou, and all kinds of Medicated Lozenges.
ESTABLISHED 1843. PRICE LIST ON APPLICATION

MEDICATED LOZENGES

For Throat Hospital, British Pharmacopœia, and every description of Medicated Lozenges for Wholesale and Export Trade, apply to

T. BAGE BLYTON & CO.
PHARMACEUTICAL CHEMISTS.

Manufacturers also of BOILED SWEETS of the BEST QUALITY POSSIBLE.

SOLE PROPRIETORS OF

TWEMLOW'S CHLORODYNE,

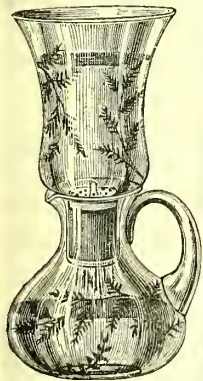
Which has an extensive sale among Hospitals, Dispensaries, Medical Men, and CHEMISTS and Druggists throughout the World. Proportions of active ingredients stated upon the label of every bottle.

Proprietary and other Lozenges made for the Trade. Price Lists sent on receipt of application enclosing business card.

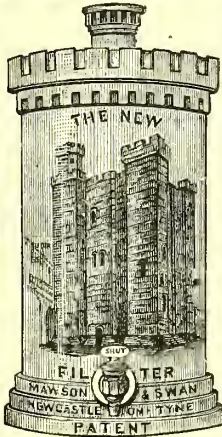
Address—76 GORDON STREET, LOWER BROUGHTON, MANCHESTER.

THE ONLY FILTERS PROVEN BY ANALYSIS.

B E W A R E



Engraved Glass ... 6/6
Do., with handle
(with six charges) 7/6



White, decorated 1 2
Earthenware .. 35/- 45/-

OF DRINKING WATER

which has not been thoroughly Filtered; as, besides Lead, Lime in excess, and other mineral impurities, most waters contain either sewage, the eggs of intestinal worms, and hydatid disease, or the

Germes of Infectious Diseases, such as Cholera, Dysentery, Typhoid Fever, &c.

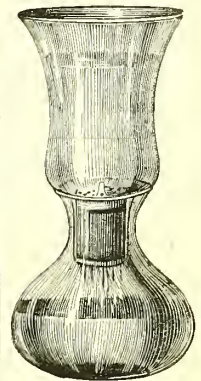
Repeated analyses have proved that

**MAWSON'S
NEW
PATENT FILTER**

Removes all these impurities, and that it is the only efficient, practical, and scientifically reliable Filter.



Size— 1 2 3 4 6
Price £14/6. 21' 27' 35/ 50/

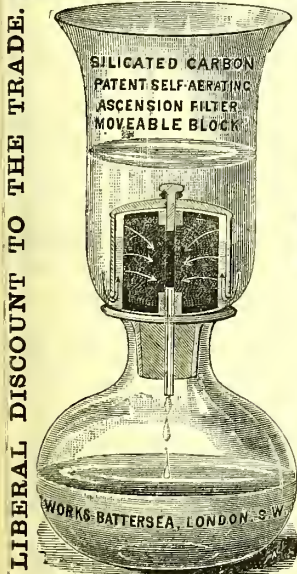


Plain Glass ... 46
Do., with handle
(with six charges) 5/6

MAWSON, SWAN & WEDDELL,
20 West Grainger Street, Newcastle-on-Tyne.

WHOLESALE AGENTS—London: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. William Toogood; Messrs. Lynch & Co. Manchester: Messrs. Woolley, Sons & Co. Liverpool: Messrs. J. H. & S. Johnson; Messrs. Symes & Co.; Messrs. Evans, Sons & Co. Birmingham: Messrs. Churchill & Sons; Messrs. Salt & Co. Edinburgh: Messrs. Duncan, Flockhart & Co.; Messrs. Raines & Co. Glasgow: Glasgow Apothecaries' Co. Belfast: Messrs. Grattan & Co. Cork: Goulding & Co., Lim.

LEAD POISONING



Glass Table Filter

So commonly the result of Drinking Unfiltered Water is rendered

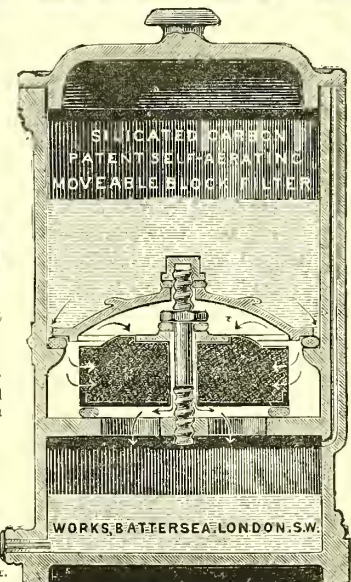
**IMPOSSIBLE
BY USING
SILICATED CARBON
FILTERS**

Through which no particle of Lead can pass. This fact is attested by the leading analysts of the day.

"The most remarkable property of the Silicated Carbon Filter appears when its filtering power is tested in the removal of Lead from solution. . . I wish to dwell with the utmost emphasis upon the value of these Filters for removing Lead."

H. C. BARTLETT, Ph.D., F.C.S.

The Silicated Carbon Block can be Instantly Removed, leaving the whole of the Filter Open for Inspection and Cleansing



Domestic Filters.

FOR PRICES AND FULL PARTICULARS, WRITE TO THE
SILICATED CARBON FILTER CO., BATTERSEA, LONDON, S.W.

WHITE AND SOUND TEETH.**JEWSBURY & BROWN'S****ORIENTAL TOOTH PASTE.**

This old-established and increasingly favourite Dentifrice has been over Sixty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate. The original and only genuine is manufactured solely by

JEWSBURY & BROWN, Chemists, MANCHESTER,

and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered. Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards and directions for enclosure.

SHIPKOFF & CO. OTTO OF ROSE

MANUFACTURERS & MERCHANTS,
KIZANLIK, BULGARIA.

VIRGIN OTTO ONLY DEALT IN

REPRESENTED IN ENGLAND BY

GEO. P. BAKER, 19 Ivy Lane, Newgate St., London, E.C.

IMMENSE SALE.

SOLD EVERYWHERE.

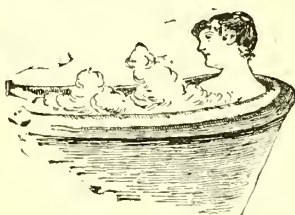
**WOODS' ARECA NUT
TOOTH PASTE,**

As used and recommended by Madame
Marie Roze, the Prima Donna.

PRICE, 6d. and 1s. per Pot.

CAUTION.—SEE "WOODS, PLYMOUTH,"
ON EACH POT.

PASTA MACK.



TRADE MARK.

Of all Chemists and Perfumers.

Sole Manufacturer, H. MACK, ULM a/D.

By using this new and
excellent preparation a
most delicious BATH
AND TOILET WATER
will be obtained.

Pasta Mack
SOFTENS the WATER
and

**BEAUTIFIES
the
COMPLEXION**

AYER'S RECAMIER PREPARATIONS FOR THE COMPLEXION.

Positively made from a formula used for forty years by Madame Recamier, the noted beauty of her day, and never before manufactured for sale. Used daily, to the exclusion of all other articles of a like nature, by Mesdames Adeline Patti, Sarah Bernhardt, Lillie Langtry, Mrs. James Brown-Potter, and hundreds of others. Terms to the trade on application.

RECAMIER CREAM—A Curative. RECAMIER BALM—A Beautifier.

RECAMIER POWDER—For Ladies and Infants, and Gentlemen after Shaving

Home Office—39 & 41 Park Place, New York City, U.S.A.

HIGH-CLASS PERFUMERY

"Messrs. J. Atkinson & Co.'s

PERFUMES are in aroma and
strength particularly fine."

Chemist & Druggist,
Jan. 29, 1887.

J. ATKINSON & CO.
Proprietors of the
REGISTERED
"ZENITH"
BRAND PERFUMES.

Samples and quotations on application,
at their only address,

5 FINSBURY SQUARE, LONDON.



**FABRIQUE
DE**

**MATIÈRES PREMIÈRES DE
PARFUMERIE.**

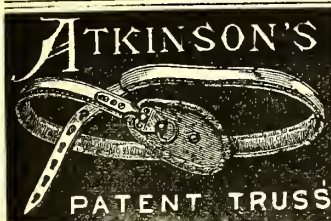
PARFUMERIES DE SEILLANS

(VAR, FRANCE).

Flower Pomades. Perfumed Oils. Flower Extracts.
Essential Oils. Distilled Waters, &c., &c.

OF ALL WHOLESALE DRUGGISTS, OR WHOLESALE ONLY OF

R. C. TREATT, Dunster House, Mincing Lane, London.

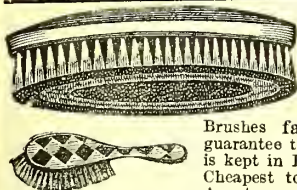


ATKINSON'S PATENT TRUSS.

"Quite a new departure. The most ingenious and effective truss we have ever examined."—*Med. Press and Circular*.
 "An important feature is the peculiar form of the face of the pad, which allows pressure to be given by a flat surface, or a more or less obtuse one, at discretion. The advantages of this truss are very marked."—*British Medical Journal*.
 "An important improvement. The practical surgeon will see the great advantages presented by this truss."—*The Lancet*.
 "Will supersede the old-fashioned, inefficient, and uncomfortable instruments which makers still continue to supply to sufferers from hernia."—*Hospital Gazette*.

Illustrated Particulars Gratis by Post from the Patentee—

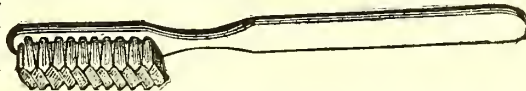
B. F. ATKINSON, 7 Mill Street, Hanover Square [late S Hemming's Row Charing Cross.



DUKAS & CO., 20 Red Lion Square, LONDON, W.C.

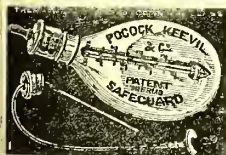
WHOLESALE BRUSH MANUFACTURERS,

Employ over 1,000 hands, and supply their Brushes far Cheaper than other Firms, and guarantee the quality cannot be surpassed. Large Stock is kept in London of several Thousand Patterns, from the Cheapest to the very Finest Quality. No Travellers or Agents are employed.



Specialities: Hair Brushes, Shaving, Tooth, Nail, and Cloth Brushes. Samples sent on application.

THE PATENT THERMO SAFEGUARD FEEDING BOTTLE.



A THERMOMETER Embedded in the Glass.

Retail Prices, 2/9 & 2/- each.

WHOLESALE of Principal London Houses, or of

POCOCK, KEEVIL & CO.

72 & 74 Wandsworth Road, London, S.W.

DISPENSING BOTTLES

SPECIAL NOTICE.

We now supply four kinds of Bottles, 6 and 8 ounces, at 7/-, 7/6, 8/9 and 10/- per gross respectively; each kind is first-rate value for the money. Other sizes equally low. 1½-ounce Vials, 4/3 per gross. Feeding Bottles, fitted complete, "The National" and "The Jubilee," Screw Neck and Black Fittings, 3/6 per dozen; first-rate bottles. A sample of any kind forwarded on application.

SPONGE IMPORTERS.

M. PETERSON & CO.

(ESTABLISHED 1870),

75 ST. ANNE STREET, LIVERPOOL.

FOR HOME, FOREIGN, & COLONIAL MARKETS.

I. ISAACS & CO.

GLASS BOTTLE MANUFACTURERS,

25 Francis Street, Tottenham Court Road, London, W.C.

Established upwards of 50 years. Bankers—London and Westminster.

PRIZE MEDAL,
International
Health Exhibition,
1884.

THE NEW PERMANENT

ENGRAVED WINDOW TABLETS

AWARD OF MERIT,
International
Sanitary Exhibition,
1881.

IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

For Proprietary Articles, 100 8x6 Ruby Tablets, £3 15s. 0d.

J. R. CORSAN, THE LONDON SAND-BLAST WORKS, 80 GRAY'S INN ROAD, W.C.

TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.

METHYLATED SPIRIT & FINISH

Supplied of the best quality in wholesale quantities by

J. & W. HARVEY & CO., Distillers, Yoker, GLASGOW.

LONDON AGENTS—JAMES CHAMBERS & CO., 23 BIRCHIN LANE, CORNHILL, E.C.

J. DUNLOP MITCHELL & CO.,

130 & 136 Ingram St., Glasgow; & Old Trinity House, Water Lane, London, E.C.

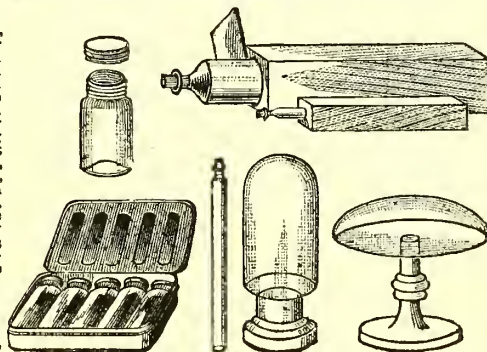
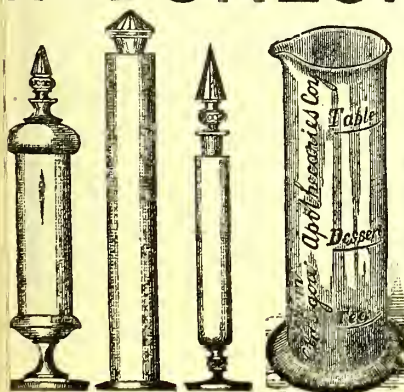
Sample Bottles, Vials and Tubes, Wooden Post Cases, Corrugated Paper and Cardboard Boxes, Parchment and Linen Sample Bags, Travellers' Metal and Leather Pocket Sample Cases, fitted with all kinds of Bottles and Tubes. Fine Stopped and Unstopped and Metal Screw Top Bottles. Large variety of Show Bottles and Stopped Jars for exhibiting specimens, suitable for Show and Post Samples of Oils, Varnishes, Spirits, Paints, Colours, Soaps, Chemicals, Drugs, Sugars, &c., &c. Laboratory Glassware and Utensils. Specialities. Measuring Glasses, as per diagram, Tea, Dessert, and Table Spoonful, with name and address of any Chemist neatly engraved on opposite side; acts as a capital and permanent advertisement; price 24s. per gross; named sample gratis per post.

Correspondence solicited.

Samples or Illustrations on application.

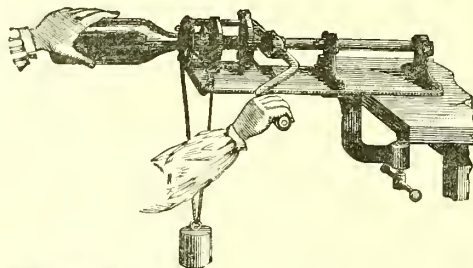
Agents Wanted Abroad,

Telegrams: "MITCHELL GLASGOW."



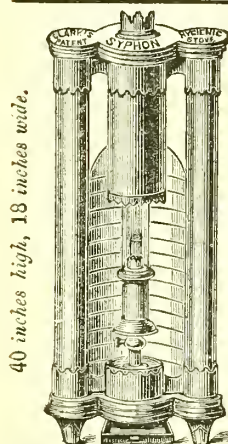
NEW CAPSULING MACHINE

The only Machine
which leaves no crease
or pleat on the
Capsule.



Can be fixed to any
Counter.
A single pull of the lever
is sufficient
to fix the Capsule.

Patentee—**C. MELIN**, 37 Crutched Friars. LONDON, E.O.



40 inches high, 18 inches wide.

THE "SYPHON" (REGISTERED TITLE) (CLARK'S PATENT) GAS HEATING STOVES.

NO FLUE REQUIRED.

No smoke. No smell. No dirt or trouble. No danger. All sulphurous vapours are condensed inside the Stoves, and passed off as a liquid into tray beneath. The ONLY SAFE ones for use in Hospitals, Sick Chambers, Greenhouses, Bedrooms, Halls, Shops, Offices, Churches, Schools, &c. **BEWARE OF IMITATIONS.**

Price Lists and Terms on application to

S. CLARK & CO., Patentees
"Syphon" Works, Park St.,
ISLINGTON, LONDON, N.

ALBO-CARBON GAS LIGHT

UNDER ROYAL LETTERS PATENT.

INVALUABLE TO THE ANALYST AND DISPENSER.

Enormous Saving of Gas; Brilliancy and Softness unequalled
Brightest, Steadiest, and Coolest of Gas Lights; easily applied
to existing fittings; perfectly simple and absolutely safe.

LIGHTS from 6s. upwards.

ALBO-CARBON, 3d. per lb., or 18s. per cwt.

SEVEN PRIZE MEDALS.

For name of nearest Agent apply to

ALBO-CARBON LIGHT CO., LIM.
Wholesale Depot, 74a James St., Westminster.
ESTABLISHED 1878.

THE SELF-OPENING TIN BOX COMPANY

(GRIFFIN'S PATENT).

ALBION TIN WORKS, YORK ROAD, KING'S CROSS, LONDON, N.

Telegraph Address—"TINBOX LONDON."



Boxes ready made up, or the Patent Tops only (ready for making up), are supplied.

THE NEW TIN BOXES for all kinds
cally Sealed Preserved Foods, DRUGS and CHEMICALS.

THE NEW TIN BOXES are as cheap
as the ordi-
nary Boxes, require no soldering up, and can be opened with a penny
piece.

THE NEW TIN BOXES are being
adopted by
the largest Food-preserving Houses and CHEMISTS, to whom
references can be given.

THE NEW TIN BOXES are also per-
fect for Tea
and Coffee Canisters, Biscuit Boxes, Confectionery, Paints, Oils,
Varnishes, Soaps, &c.

THE NEW TIN BOXES are described
by the Times,
Standard, Chronicle, Illustrated News, Engineer, Grocer, Oil and
Colourman, and Press generally, as the "neatest and most elegant
invention ever made."

CAUTION.

IN THE HIGH COURT OF JUSTICE, CHANCERY DIVISION.

GRIFFIN v. NOAKES. 1887. G. No. 1,088.

GRIFFIN v. FRAVER. 1887. G. No. 1087.

As we understand from some of our Clients that, from false representations made, an impression prevails that the proceedings in these actions have failed, we beg to inform the public that such is not the fact, and that the proceedings are being carried on as fast as possible, in the Chancery Division of the Court, to restrain the Defendants from selling or making Tins similar to those manufactured by us, and from infringing our Patents. The Defendants, pending the proceedings, have been ordered by the Court to keep an account of all sales made by them. Our Solicitors, Messrs. CLARKSON, GREENWELL & Co., have had instructions from us to proceed against all persons so offending.

FOR THE SELF-OPENING TIN BOX COMPANY, G. FEATHERSTONE GRIFFIN, Manager.

"SHERWIN" MACHINES

IN STOCK.

6 Disc Drug Mills ... at	£5 each.
2 Edge Runner Mills ,,	£18 ,,
1 Rotary Screen Mill ,,	£60
3 ,, ,, ,,	£80 ,,
1 ,, ,, ,,	£140
2 Disintegrators ... ,,	£23 ,,
2 ,, ,, ,,	£40 ,,
1 ,, ,, ,,	£70
2 Bone Mills... ,,	£80 ,,
1 ,, ,, ,,	£140
12 Mixers, with Screen ,,	£1 ,,
4 ,, ,, ,,	£1/12 ,,
3 ,, ,, ,,	£3/10 ,,
2 ,, ,, ,,	£7 ,,

IN USE FOR

ALUM
BARK
BARYTES
CHARCOAL
COAL
DRUGS (many kinds)
GLUE
GLASS SLAG
GUANO
GYPSUM
HORNS & HOOFs
LIMESTONE
LOCUST BEANS
MANGANESE
SAND
SODA
SULPHUR
WOOD

GEO. E. SHERWIN, CENTRAL WORKS, BIRMINGHAM.

A REQUISITE FOR EVERY CHEMIST.

THOMPSON'S "EXCELSIOR" GELATINE PILL-COATING MACHINE. (REGISTERED.)

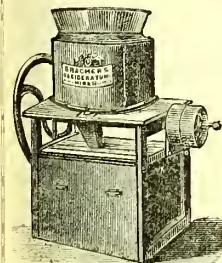
This is the first and only perfected Machine introduced of British manufacture for Gelatine Pill Coating (see "Chemist and Druggist's Diary" for 1887, page 246). The Machine is now supplied on a smaller scale, and is constructed in such a way that prescription pills may be made, coated, and be perfectly dry to send out in half-an-hour. The importance of this advantage will be apparent to all Dispensing firms.

Price of Small Machine, with 12 slides and dipping pan, is £7 10s.; Hot Air Director, 10s. extra.

FOR FURTHER PARTICULARS APPLY TO

JAS. ROBERTSON & CO.,
35 George Street, EDINBURGH.

THE GREAT DIFFICULTY SOLVED!



To Manufacturing Chemists, &c.

How to Grind Crystals, Starch, &c.
How to Reduce Lumpy Powders.
How to Mix Many Ingredients in
various proportions and produce
a Perfect Blend with great ra-
pidity!! [1]

At one
Operation!

BRACHER'S PATENT

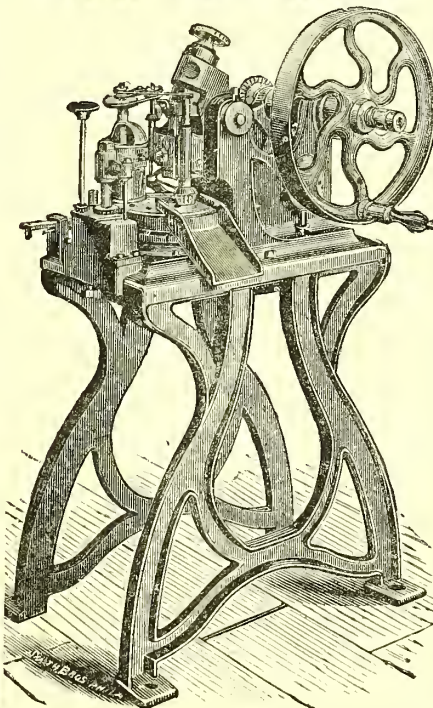
Trade "DESIDERATUM" Mark.

Mixer and Drug Mill Combined

BRACHER & CO., West Hill, WINCANTON.

SHOW ROOMS:—LONDON—100 Houndsditch; MANCHESTER—
24 Corporation Street; WOLVERHAMPTON—2 Cleveland Street.
All communications to WINCANTON.

McFERRAN IMPROVED COMPRESSED PILL MACHINE.



Makes Hypodermic Tablets, Pills, and every Size of Tablet & Lozenge.

FOR PARTICULARS ADDRESS

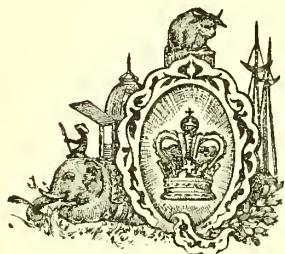
J. A. McFERRAN, 1720 GREEN STREET,
PHILADELPHIA, PA., U.S.A.

SAML. CLARKE,

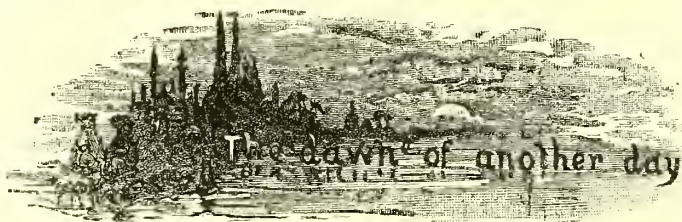
"FAIRY" LAMP AND "FAIRY" LIGHT WORKS,

CHILD'S HILL, LONDON, N.W.

Show Room: 31 ELY PLACE, E.C.



QUEEN'S BURMESE WARE is of the nature of glass, its discovery (for that it was rather than invention) is due to the United States; the ware is now manufactured in England under a patent. Its loveliness when illuminated is due to the material, its translucency, and its blending from peach to yellow, which is of the perfectness that radiated heat alone can effect.



"FAIRY" LAMPS AND "FAIRY" LIGHTS.

The patentee of the "FAIRY" Lights considering the Burmese Ware very suitable for his "FAIRY" Lamps, has had made of that Ware some very beautifully designed Chandeliers, Candelabra, Brackets, Bowls, &c., which he is pleased to add to his already large and varied stock of "FAIRY" Lamps.

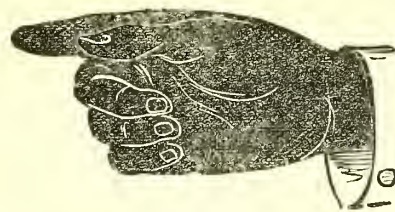
His additional Show Room at 31 Ely Place, Holborn Circus, is fitted up expressly for the display of these beautiful goods and is now ready for inspection by the Trade. There will be a Special Illuminated Display every Tuesday and Friday. The goods will be on show every day.

This "FAIRY" system of Illumination has called forth numerous encomiums from both individuals and the Press, but no greater compliment could possibly be paid than that of the Royal Botanic Society of London on June 30th and July 10th, 1886, when not only did the Council graciously award a "Special First Class **GOLD MEDAL**," but a resolution conveying a vote of thanks "to Mr. Clarke for his great assistance at the Evening Fêtes of June 30th and July 7th, 1886," &c. Then again in *Punch*, July 17th, 1886, there appeared—"Royal Botanical Fête! **Illuminations perfect. Great Success. All sweetness and light.**" Complimentary articles appeared in *Truth*, February 25th and March 4th, 1886; *The World*, April 21st, 1886; *The Pottery Gazette*, August 2nd, 1886; and various other Journals of high-class standing.

N.B.—All the Lamps bear the Trade Mark "**FAIRY**," without which none are **genuine**.

Patented, and Trade Mark "FAIRY" Registered in Great Britain, France, Germany, Belgium, Spain, Austria, Russia, United States of America, and all the Australian Colonies.

"KILL TWO BIRDS WITH ONE STONE."



"Buy **A 1 BRAND MENTHOLS** with printed directions on, and in addition have an Advertisement of a Spécialité of your own along the back of the boxes, such as 'Smith's Tonic for Strengthening the Nerves, 1s. 6d. per bottle,' &c. By this means every Menthol Cone you sell helps to create a sale for your own preparation. If you wrap a handbill round a bottle, when the bottle is used the bill is thrown away and the advertisement lost; but the printing on the Menthol boxes being permanent, every time a person uses the cone he is bound to see any advertisement appearing on the box, thus making this one of the most lasting and efficient means of advertising to be found anywhere. The only chance for a chemist nowadays is in selling his own specialities, therefore do not lose such an opportunity as this of advertising them."

BUYERS OF AS SMALL A QUANTITY AS ONE GROSS

Can have their name and address printed on the back of the boxes *free of charge*, thus bringing this offer within the reach of most Chemists, a gross of cones being no ill stock at any time.

SPECIAL PRICES TO LARGE BUYERS. QUOTATIONS SOLICITED.



No. 9s.

Sample of
Printed Cones
sent with
pleasure to in-
tending
large buyers,
showing styles of
Printing,
Views, &c.,
which can be
printed with
equal ease from
photographs.

No. 9s.
**A CHEAP AND SPECIAL
LINE FOR THE NEW
YEAR.**
Handsome Case and good-
sized Cone.
No better value in the
Market, 4/ per doz.

DUMMY CONES for the
Window given away with
orders of 25/ and up-
wards.



No. 17s.—Draughtsman Shape, boxwood, 4/ per dozen.

No. 17.—Medium size, ebony only, 6/3 per dozen.

No. 17L.—Very large and handsome size, a good 1/ line, boxwood, 6/6 per dozen.

No. 24.
An attractive style, bottle
shape, the neck forming
a good holder for the
Menthol.

Bound to sell, the cases
alone being worth the
money.

3/6 per dozen.

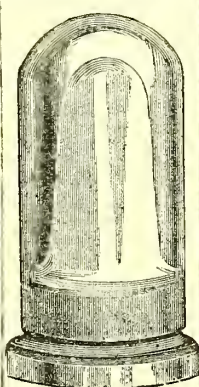
**BE SURE AND ORDER
AS
A 1 BRAND.**



No. 24.

No.	Doz.
1 6d. Glass Bottles with Metal Screw Cap..	3 3
1 6d. Blue Ditto Ditto	3 4
2 6d. Willow Wood, lid serving as bolder	3 0
2 6d. Ditto, Barrel Shape	3 3
3 9d. Glass Bottles, with Metal Screw Cap.	5 0
4 1s. Do. Do. (Menthol on Wood Mount)	6 0
5 1s. Do. Do. (Bullet Cone wrapped in tin foil)	6 0
6 9d. Boxwood, Pedestal Shape	5 0
7 9d. or 1s. Do. Barrel Shape	6 0
8 9d. or 1s. Do. Acorn Shape	6 0
9 9d. or 1s. Do. Skittle Shape	6 0
9A 1s. or 1s. 6d. Do.	7 6
9C 1s. 6d. or 2s. Do.	9 6
10 6d. Oblong Willow Boxes, 12 on a Card	3 6

ORDER DISTINCTLY AS
SHIRLEY'S A 1 BRAND.

Nos. 21 & 21A, 1s.
,, 23 & 22A, 6d.

No.	Doz.
11 6d. Boxwood Pedestal, each	4 0
11A 6d. Ditto 12 in a box	3 6
13A 1s. Vegetable Ivory, 12 in a box, Acorn Shape	5 9
14 1s. Pyramid Shape, ea. in a box	6 6
14A 1s. Ditto 12 in a box	6 3
15 6d. Cardboard Case, 12 in a box	3 0
18 1s. Combination Pineusbion and Menthol	7 0
19 6d. Boxwood, Egg Shape, new elegant Card	3 0
20 1s. Smelling Bottle Menthol	1 6
21 1s. Menthol in Boxwood, stop- per covered with glass shades, very attractive, each in a box	6 6
21A 1s. Ditto 12 in a box	6 3
23 6d. Ditto Ditto each in a box	4 0
23A 6d. Ditto Ditto 12 in a box	3 6

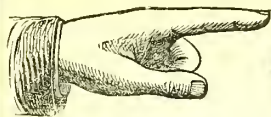
Of all **WHOLESALE HOUSES** and
MERCHANTS, or **DIRECT** from
the **MANUFACTURER.**

**MENTHOL
OINTMENT.
A 1 BRAND.**

A New Preparation,
in 1 oz. blue opal
pots, 8/ per dozen.
In bulk, ½ lb., 1/6;
¼ lb., 2/9; 1 lb., 5/3.
Try some, and put
it up as your own
Spécialité, extra-
ordinary results hav-
ing been obtained
from its use.

SOLE MANUFACTURER—

ARTHUR W. SHIRLEY, (LATE J. G. Shirley), 30 Paternoster Square, London, E. C.



ARMBRECHT'S COCA WINE.

AGENTS APPOINTED.
2 DUKE ST., GROSVENOR SQUARE.

PRIVATE TUTOR.

MR. JAMES W. SAUNDERS

(From the Royal School of Mines),

ASSISTANT PUBLIC ANALYST, ASSAYIST, &c.
6 ROCHESTER SQ., CAMDEN RD., N.W.

Reads with gentlemen preparing for all examinations. No classes or demonstrators, but individual personal attention. Fees moderate. Chemical and Microscopical Analyses undertaken.

Laboratory—65 EUSTON ROAD, KING'S CROSS, N.W.

PURE CRUSHED LINSEED.

Contains all the Oil. The finest procurable.
Prepared from specially selected seeds.

Sold in 1 cwt. bags, 17s. per cwt., bags free; or in 28 and 56-lb. parcels
18s. per cwt.; also in $\frac{1}{2}$ and 1 lb. tins and parchment packets.

IDRIS & CO.

MANUFACTURING CHEMISTS AND MINERAL WATER MAKERS,
ASCHAM STREET, LONDON, N.W.

The most Agreeable and Rapid Remedy for Asthma, Consumption,
Coughs, Colds, Bronchitis, Throat Affections, Shortness of Breath, and
all Disorders of the Chest is



Prepared only by DA SILVA & CO., 26 Bride Lane, Fleet Street, LONDON.
Sold by all Druggists at 1/1 $\frac{1}{2}$, 2/9, 4/6, and 11/ per box.

THE MANCHESTER MAKERS OF

METH. SPIRIT

Established
1840.

AND FINISH.

J. & D. MACNAIR & CO.,
29 Robert St., and Bridgeton,
MANCHESTER, and GLASGOW.

IMPORTERS OF

SHELLAC, GUMS, &c.

Send for prices and samples.

ANALYTICAL AND CONSULTING CHEMIST.

GEO. LOGAN RAIT, F.C.S., &c.

Laboratory—31 MOORGATE ST., LONDON, E.C.

Assistance given to Manufacturers and others requiring Chemical
knowledge.

Fifty per cent. discount allowed to the Trade.

WRITE FOR PRICE LIST OF

EBOLITE. PATENT GLASS. EARTHENWARE.
(Unbreakable.) (Deep Ribs and Stout.) (Improved Pattern.)

ALL SIZES
SUPPLIED

FUNNELS

GOOD QUALITY
LOW IN PRICE.

SUITABLE FOR ALL TRADES.

SPECIAL TERMS TO WHOLESALE BUYERS.

AYRTON & SAUNDERS, LIVERPOOL.

PETROLEUM JELLY.

EQUAL TO AND CHEAPER THAN VASELINE.

SANITARY FLUID AND SHEEP DIP.
THE CHEAPEST AND BEST DISINFECTANT.

GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.
Samples and Prices on application.

GRINDLEY & CO., POPLAR, LONDON, E.

HORN & SON

AUTHORISED AGENTS FOR PROCURING

PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).

Guide to New Patent Law and Registration gratis.

MESSRS. HORN & SON supply, on appli-
cation, full particulars of the NEW
MERCHANDISE MARKS ACT, and the
Cases recently decided. Labels revised to meet
the New Law.

PERFUMES, No. 30.

FIFTY KINDS.

9s. for 20 oz., Carriage Paid.

Samples of any kind for 2 stamps.

When buying, compare my Perfumes with other makers', and buy the best.

GEORGE DURRANT, HERTFORD.

London Depot—Messrs. BAISS BROS. & CO.

THE PERFECT SURGICAL BANDAGE.

Preferred to all Makes hitherto used.

In Cases of Twelve Six-yard Rolls, 2 inches wide, 3s. 9d.; 2 $\frac{1}{2}$ inches, 4s. 6d.;
3 inches, 5s. 6d.; or, Case containing twelve Six-yard Rolls
of each width, 13s.

Free by post, to any address in the United Kingdom, for prepaid orders only.

MANUFACTURED BY THE

Bole Hall Mill Company, Tamworth, Staffordshire.

HEALTHITAS,

THE NEW DISINFECTANT, in Powder, Fluid, and Soap, &c.

CHLORIDE OF LIME, in Bulk, or in $\frac{1}{4}$, $\frac{1}{2}$, and 1 lb. Air-tight Packages
CARBOLIC POWDER, from £2 10s. per Ton.

✓ NEW CARBOLIC SANITARY CO., L^D. ✓
HACKNEY.

INDIARUBBER TYPE



On Metal body, perfectly accurate, for instantly making a RUBBER
STAMP of any desired wording. Send for Specimens and Price
List to the Patentee,

E. M. RICHFORD, Dept. C. 44 Snow Hill, London,

Manufacturer of Rubber Stamps, Dating and Numbering Presses,
Self-Inking Pads, &c., and Stamp-making Outfits.

Chemists in all parts of the world can add largely to their profits by pushing our
Goods. Liberal terms.

Medical and Sanitary
Exhibition, 1881.

DIABETES

AWARD OF MERIT.

VAN ABBOTT'S GLUTEN BREAD,

And all other suitable Foods for Diabetic Patients.

Dietary Tables and Price Lists post free on application.

G. VAN ABBOTT & SON, 5 Princes St., CAVENDISH SQ., W.

"SPÉCIALITÉ" LIME JUICE

NO MUSTY FLAVOUR. REQUIRES NO SUGAR.

For Sample and Terms

FELTOE & SONS,

ALBEMARLE STREET, LONDON. W

Can be obtained through the Wholesale Houses.

Critchley's Starch Gloss

Makes Starched Linen like new. Does not stick to spider-like Materials. Once tried always wanted. Used in the Royal Landries. Sold everywhere, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

Prepared only by
T. CRITCHLEY,
BLACKBURN, and
1 & 2 Australian Avenue,
LONDON, E.C.

PEPSIN. PORCI PUR.

P. P. P. BRAND.

1-oz. Bottles, 2/2 oz.; (16 x 1-oz.), 2/1 oz.

THE BEST AND CHEAPEST PEPSINE ON THE MARKET.

Quotations and Samples for Wholesale Quantities on application.

CHAS. GREEN & CO., Manufacturing Chemists,

TOWER CHAMBERS, MOORGATE STREET, LONDON, E.C.

TRADE MARK.



SODEN MINERAL PASTILLES

The BEST and SAFEST REMEDY for all Affections of the THROAT, CHEST, LUNGS,

COUGHS, ASTHMA, SORE THROATS, BRONCHITIS, CATARRH, CONSUMPTION.

17 HARLEY STREET, CAVENDISH SQUARE, W.—I have watched the effects of the Soden Waters for a considerable period, and regard them as extremely valuable in obstinate Catarrhal Affections of the Throat. The small amount of iron which they contain renders them very useful in the early stages of Throat Consumption, and they do good in nearly all cases of relaxation of the mucous membrane. The Soden Mineral Pastilles offer a most convenient method of using the Waters, producing both a Local and General effect. They are especially beneficial in Catarrhal Diseases of the air passages. I frequently found them of great service in the case of Singers and Public Speakers. (Signed)

MORELL MACKENZIE, M.D., LONDON.

WHOLESALE, 10s. 6d. NETT PER DOZ.; RETAIL PRICE, 1s. 1½d. PER BOX.

CAUTION.—See that each box has Dr. W. Stoeltzing's Signature, and our Trade Mark (two Globes with Cross and Crescent), which is impressed on each Pastille; none others are genuine.

THE SODEN MINERAL PRODUCE CO., 10 DYER'S BUILDINGS, LONDON, E.C.,
HOLBORN,

Any Chemist applying to us will be supplied gratis with Counter Bills, size about 11 x 9, printed on one side only; also with Transparent Showcards for the window.

THE VEREINIGTE FABRIKEN CHEMISCH-PHARMACEUTISCHER PRODUCTE,
Feuerbach-Stuttgart & Frankfurt a/M, **ZIMMER & CO.**

Telegraphic Address—"JOBSTZIMMER FRANKFURTMAIN."

QUININE SULPHATE. Brand Jobst or Zimmer. Whitest and most bulky crystals; utmost purity warranted.

QUININE HYDROCHLORATE. Brand Jobst or Zimmer. Whitest and most bulky crystals; utmost purity warranted.

ZIMMER'S QUININE PEARLS, in original bottles or boxes of 25, 50, or 100. Each pearl contains 0.1 g.

(= 1½ grain) Chinin sulfur, puriss. c. bisulf. parat.

CINCHONIDINE, CINCHONINE, QUINIDINE, QUINOÏDINE, and all other preparations from China Bark.

Price Current of the other Pure Chemicals will be forwarded upon application.

SOLE WHOLESALE AGENTS:

A. & M. ZIMMERMANN, 6 & 7 CROSS LANE, ST. MARY-AT-HILL, E.C.

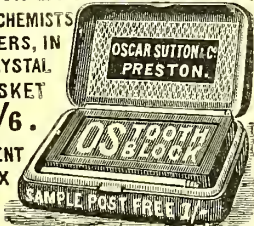
BEST & SAFEST DENTIFRICE

SOLD BY ALL CHEMISTS
AND PERFUMERS, IN
ELEGANT CRYSTAL
TOILET CASEKET

PRICE 2/6.

ALSO IN PATENT
METALLIC BOX

PRICE 1/-



OSCAR SUTTON & CO., Preston, Lancashire.

OS Tooth Blocks can be had through all the leading Wholesale Houses throughout the world. No. 0, loose, without boxes; No. 1, in patent metallic boxes; No 2, in crystal caskets.

The sales have enormously increased. Counter bills, with retailers names, supplied gratis through any Wholesale Agent.

OVER 1,000 TESTIMONIALS.

BATTLE'S VERMIN KILLER. { Mice eat it readily and Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1857.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply

Telegraphic Address—"SANITAS LONDON."
Telephone No. 1011.

THE "SANITAS" COMPANY, LIMITED

(Contractors to H.M.'s Admiralty),

LETCHFORD'S BUILDINGS, THREE COLT LANE, BETHNAL GREEN, E.

London, January, 1888.

Sole Manufacturers of "SANITAS" Disinfecting, Toilet and Veterinary Fluids, Powders, Soaps, &c.

Gold Medal, Antwerp Exhibition, 1886, and Exposition du Travail, Paris, 1885.

First-Class Certificate and Gold Medal, Calcutta International Exhibition, 1883-1884. Medal, Sanitary Institute of Great Britain, 1882. Silver Prize Medal (Highest Award) National Health Society's Exhibition, 1883. Award, International Medical and Sanitary Exhibition, 1881.

Authorised by H.M. Board of Trade. Used by most Public Health Bodies in Great Britain.

"Sanitas" Disinfecting Fluid.
"Sanitas" Disinfecting Oil.
"Sanitas" Disinfecting Emulsion.
"Sanitas" Crude Disinfecting Fluid.
"Sanitas" Insecticide and Liquid Soap.
"Sanitas" Sheep Dip.
"Sanitas" Antiseptic Toilet Fluid.
"Sanitas" Disinfecting Powder.
"Sanitas" Antiseptic Tooth Powder.
"Sanitas" Antiseptic Toilet Powder.
"Sanitas" Disinfecting Bar Soaps, No. 1 and No. 2.
"Sanitas" Disinfecting Soft Soaps, No. 1 and No. 2.
"Sanitas" Antiseptic Toilet Soap.
"Sanitas" Brown Windsor Soap.
"Sanitas" Animal Soap.
"Sanitas" Soap Powder.
"Sanitas" Disinfecting Jelly.
"Sanitas" Veterinary Ointment.
"Sanitas" Disinfecting Furniture Cream.
"Sanitas" Disinfecting Fumigators.
"Sanitas" Antiseptic Gauze.
"Sanitas" Air Purifier.
"Sanitas" Urinal Tablets.
"Sea-Water Sanitas."
"Sanitas" Disinfecting Saw-Dust.

IMPORTANT NOTICE TO THE TRADE.

KINGZETT'S "BACTERICIDE,"

A NEW GERMICIDE, OXIDANT, AND ANTISEPTIC.

DEAR SIRS,—

Permit us to make known to you that we are now preparing and can supply this new preparation, which has been introduced by Mr. C. T. KINGZETT, F.I.C., F.C.S., Past Vice-President Society of Public Analysts, &c. This combined germicide and oxidant is intended *exclusively* for use in all cases where the employment of an antiseptic or disinfectant is required in surgical and medical practice.

This preparation contains as active principles:—

5 % of Mercuric Chloride (corrosive sublimate) and

5 volumes Peroxide of Hydrogen,

combined in such a form that the solution keeps permanently free from precipitation. It is germicidal to all classes of Bacteria and other Micro-organisms (germs and spores) and it destroys all toxic chemical products of micro-organic life by oxidation.

The Solution admits of large dilution according to the purpose in view. For general use 1 part to 50 parts water suffices.

It is not intended to advertise this new product, except in the Medical and Trade Papers.

Orders may be placed with any Wholesale House, or sent direct to us.

Kingzett's "Bactericide" is put up in 2s. blue pint "poison" bottles, and will be supplied to the Trade at 16s. per dozen, less our usual discounts.

We are, dear Sirs,

Your obedient Servants,

THE "SANITAS" COMPANY LIMITED.



LYNCH'S IMPROVED

PRIZE MEDAL,

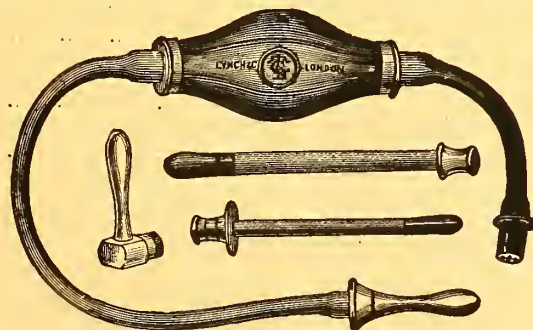


SYDNEY, 1879.

FAMILY ENEMA

(Patent 13,816, dated 12th October, 1887).

In
Mahogany Box
Lined
with Velvet,
per dozen,
49/-



In
Slide Cedar Box,
per dozen,
43/-

Less usual Discount.

LYNCH & CO. have long recognised the imperfect nature of the Valves hitherto employed in the construction of Enemas, and their liability to destruction from contact with greasy matter, from clogging, and even in some cases actually rusting in the Valvular Chamber.

In the employment of Glass they have secured a material not only free from the foregoing defects, but combining all the essentials of incorrodibility, cleanliness, and perfect continuous action.

The Valves are so situated, being placed at the extremity of both inlet and delivery tubes, as to admit of their ready removal and replacement, if desirable; and being WITHIN the Indiarubber are perfectly protected from any possibility of breakage.

The simplicity of the Apparatus, the entire absence of complication, and the extremely moderate price warrant the Inventors in hoping for its universal adoption.

MAY BE HAD WHOLESALE OF THE PATENTEES—

LYNCH & CO., 192 ALDERSGATE STREET, LONDON, E.C.

AUSTRALIAN BRANCH—15 Vaughan's Chambers, 48 Queen Street, MELBOURNE.

SHOWROOM.

We have now completed the restoration of our premises, and shall be pleased to see any of our country friends visiting London. Our Showroom contains samples of all staple goods and the most recent novelties, and we are fain to hope will prove of interest to intending purchasers.

26th November, 1887.

LYNCH & CO.

NATURAL MINERAL WATERS.

NET
CARRIAGE
PAID.

INGRAM & ROYLE,

NET
CARRIAGE
PAID.

Packing Free.]

LONDON
52 Farringdon St., E.C.LIVERPOOL
Finney Lane.BRISTOL
Bath Bridge.

[Packing Free.]

NAME.	Per Dozen.		Original Packages.				NAME.	Per Dozen.		Original Packages.			
	Bots.	½ Bots.	Bottles.	½ Bottles.				Bots.	½ Bots.	Bottles.	½ Bottles.		
Eseulap	15/	12/	25	28/	50	48/	Missisquoi	18/	..	24	35/	..	..
Alet	10/	..	50	38	..	..	Mont Dore	10/	..	50	40/	..	..
Apollinaris	6/3	5	50	25/	100	39/	Oberbrunnen	10/	..	50	40/	..	..
Birmensdorf	12/	..	50	48/	..	..	Orezza	12/	..	30	28/	..	..
Bonnes	12/	10/	50	48/	50	40/	Pullna	12/	8/	40	36/	40	25/
Bourboule (La)	11/	..	50	42/	..	..	Rosdorf	6/	..	50	25/	..	..
Bussang	7/	..	50	28/	..	..	Rosbach	6/	5/	50	24/	100	36/
Carlsbad	10/	..	50	40/	..	..	Royat	9/	..	50	34/	..	..
Condal .. .. .	..	14/	..	..	50	56/	Rubinat	15/	..	25	30/	..	..
Contrexeville "Le Cler"	8/	..	50	32/	..	..	St. Boès	12/	..	50	48/	..	..
Do. "Pavilion"	9/	..	50	35/	..	..	St. Galmier Badoit (Still)	6/	..	50	22/	..	..
Ems	7/	..	50	28/	..	..	Do. Noël (Sparkling)	12/	4/	60	26/	100	34/
Filtwick	12/	..	..	..	..	..	St. Moritz	12/	..	50	48/	..	..
Friedrichshall	13/	10/	25	25/	50	40/	Salvator .. .. .	..	9/	..	50	36/	..
Giesshubler, double-size bottles	11/	..	25	21/	..	..	Schwalbach	8/	6/	50	30/	50	24/
Do. claret-shape	8/	5/	50	29/	100	36/	Selters	6/	4/	50	23/	50	16/
Homburg	10/	..	50	38/	..	..	Sulis	6/	5/	50	23/	100	36/
Hunyadi-Janos	15/	13/	25	30/	50	50/	Tarasp	12/	..	30	28/	..	..
Johannis-Brunnen	6/	5/	50	23/	100	36/	Taunus	5/6	4/6	50	22/	100	32/
Kissingen	11/	..	50	45/	..	..	Vals (Société Springs)	8/6	..	50	32/	..	..
Kreuznach	11/	..	50	45/	..	..	Vichy (State Springs)	8/6	7/6	50	32/	50	28/
Kronenquelle	10/	..	50	40/	..	..	Victoria Ofner	14/	10/	25	27/	50	38/
Marienbad	10/	..	50	38/	..	..	Wildungen	10/	..	50	40/	..	..

CADBURYS COCOA ESSENCE

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*."Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

WRIGHT

WHOLESALE & EXPORT DRUGGISTS,
DRUG GRINDERS,
IMPORTERS AND DISTILLERS OF ESSENTIAL OILS,
ALMOND OIL PRESSERS.

MAKERS OF

Granular Effervescing Salts. Citrate Iron and Quinine. Ammonio Citrate Iron.

PEPSIN.

EXPRESSED JUICES.

Umney's Fluid Extract
Cinchona Bark.
Essential Oil Almonds,
Freed from Prussic Acid.

LAYMAN

Green Extracts.
Fluid Extracts.
Preparations of British
Pharmacopœia, 1885.

MANUFACTURING PHARMACEUTICAL CHEMISTS.

LATEST NOVELTIES IN PHARMACY & THERAPEUTICS. & NORWEGIAN COD LIVER OIL, Finest
Non-Congeaing (Season 1888 { during February}).

TINCTURES—ETHER and CHLOROFORM in Bond.

PRICES CURRENT ON APPLICATION.

FOREIGN TELEGRAMS—"UMNEY LONDON."

INLAND TELEGRAMS—"UMNEY LONDON."

SOUTHWARK, LONDON.

UMNEY.